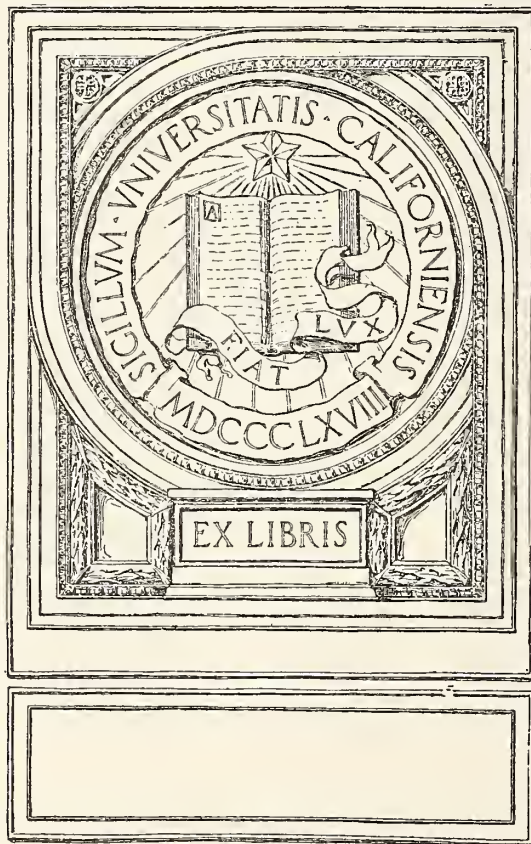
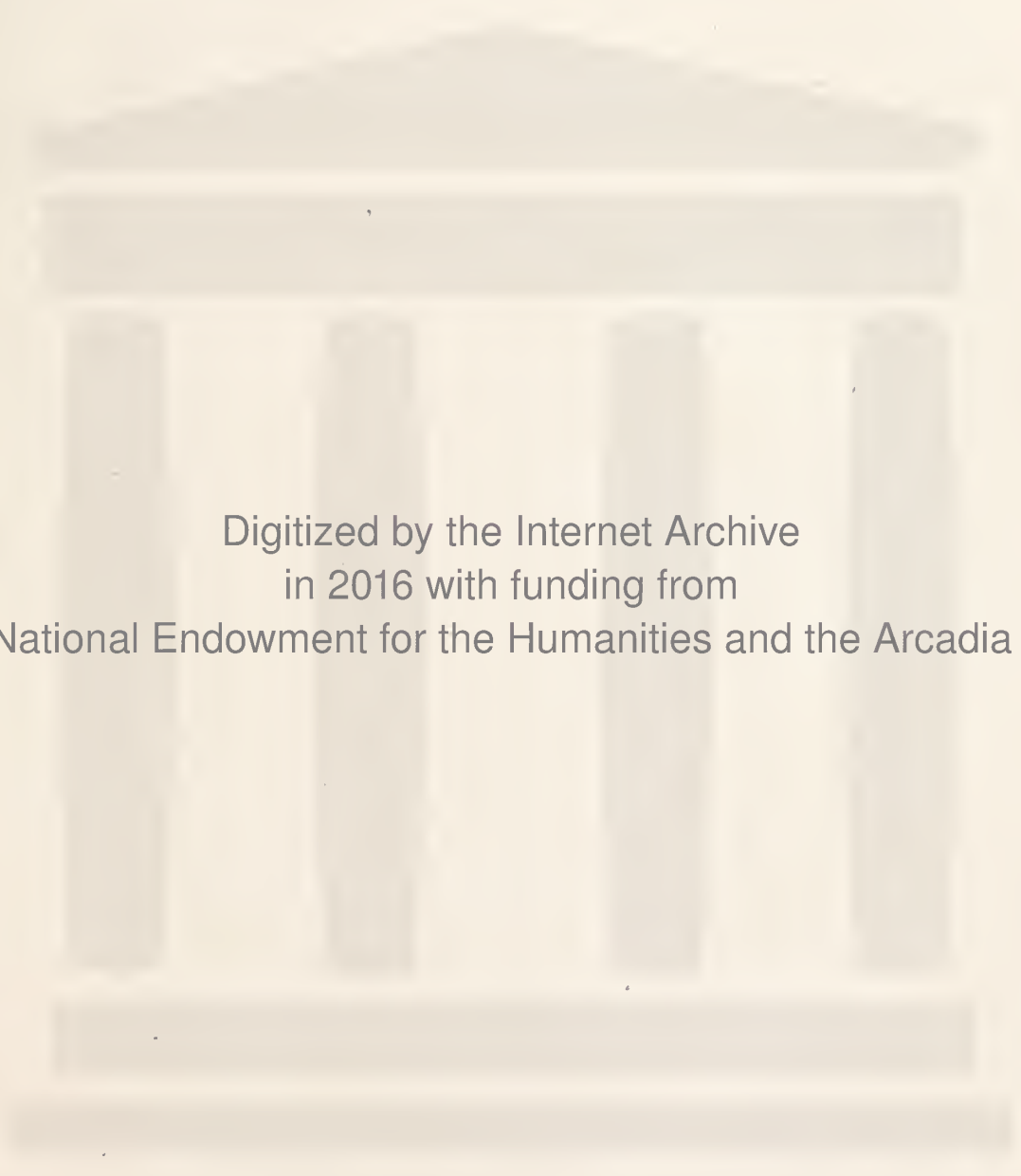


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CLASSIFICATION AND TREATMENT OF CHRONIC CRYPTOGENETIC SPLENIC TUMOR; SPLENECTOMY*

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Moines

He who attempts to set down in specific terms his conception of the relationship of the various types of chronic splenic enlargement, finds his path beset by perplexing difficulties, and the literature strewn with a confused mass of bewildering indefiniteness.

An etiological classification is, for the moment, impossible, though apparent progress is being made in this direction.

The pathological difficulties become quite evident when one recalls the histological structure of the spleen, consisting of a fibro-muscular capsule and supporting frame work, and the pulp mass; the latter composed of venous sinuses lined with endothelial cells, arterial twigs supporting lymphoid follicles with germinal centers, capillaries, ending in part in the venous sinuses and follicular network, and in part in direct termination in the red pulp proper, the cellular elements of the latter consisting of leucocytes, red blood cells, multinuclear cells, and phagocytic cells, the latter frequently containing red blood cells or fragments of such.

This heteroplasia of structure and the relationship which the spleen sustains to the organs of digestion, the circulatory system, the blood forming organs, and possibly the glands of internal secretion, associated with a readiness to undergo reactionary or degenerative changes incident to infections, or diseased processes in other organs, combine, not infrequently, to effect changes in this organ which we can only with great difficulty correlate with the symptomatology presented, and use as a basis for clinical classification and nomenclature.

One is, therefore, justified in speaking of splenic tumor, not as a pathological entity, but as a clinical feature of various diseased processes,

the nature of which must be sought out by the more refined diagnostic methods, not the least of which is the study of the peripheral blood.

I have accordingly undertaken a grouping of these conditions with respect to certain common features which their hematology presents, and which serves at the same time as a suggestive criterion for their therapeutic management.

This classification has in view the part which the spleen plays in the production of the various clinical syndromæ in which its enlargement is a more or less conspicuous feature, and implies some knowledge of its functions, the theories of which have been almost as numerous as its structure is complex.

That the spleen contributes to the formation of both red and white blood cells in many of the lower animals, and in the human species throughout fetal life, can not be denied, but that this function is lost in the post natal period of man's existence, all authorities agree.

It continues its production of lymphocytes, however, not as a specific splenic function, but in common with all lymphoid tissue by virtue of the germinal centers of its follicles.

There is considerable evidence to indicate that the spleen continues throughout life, by means of an internal secretion, to exercise a regulating function on blood production in the bone marrow, and that after splenectomy this function is compensated after a variable length of time, perhaps by the other hemolymph glands.

Among these evidences may be mentioned the alterations in the blood following splenectomy in animals, and the removal of the diseased or normal spleen in man.

Splenectomy for a normal spleen is followed soon by a marked anemia, with low reds and hemoglobin, the latter appearing later and recovering slower than the former, and a marked leucocytosis, the whole blood picture returning to normal within about a year.

On the other hand where splenectomy is done for those splenic conditions in which anemia is a marked feature, the increase in the hemoglobin and red cells is evident within a few weeks, ap-

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proximating normal within a few months, while the immediate leucocytosis lasts a variable period of weeks or months, and then gradually recede to normal.

In the former instance we have evidence of the action of a hormone secreted by the spleen which acts on the bone marrow, at once as a stimulant to red cell production and an inhibition to the production of whites, or in other words regulates the differentiation of red cells and granular white cells from a common antecedent ancestral type.

In the latter instance, the blood changes following splenectomy for the so-called splenic anemias, suggest strongly the existence of a compensatory mechanism for the regulation of blood cell production which has been masked or held in abeyance by the hyposplenism of the splenic anemic state.

The conflicting reports of the blood changes following splenectomy, so frequently encountered in the literature, are undoubtedly due to the fact that they have failed to take into consideration the splenic condition for which the operation was undertaken, or the blood states antecedent thereto.

The erythrocyte is one of the most highly specialized cells of the body, acting as a carrier of oxygen, and normally losing its nucleus before gaining access to the blood stream.

Its life history in the circulation covers a period of approximately ten days, when it undergoes solution and its hemoglobin is set free.

This hemolysis undoubtedly occurs to some extent in the blood stream, but chiefly in the spleen, where under certain diseased conditions it becomes increased.

The histological evidence of the hemolytic function of the spleen is to be found in the phagocytic red blood cell containing cells of the spleen pulp which was previously mentioned in connection with the histological sketch of this organ.

The hemoglobin set free by this hemolysis is conveyed through the splenic and portal veins to the liver where it may be found lodged in the Kupfer cells, from which it is later elaborated into bile pigments by the liver cells.

Whether this pigment is conveyed from the spleen to the liver as free pigment or by phagocytic cells must remain for the present an open question.

Where great hemolysis occurs, as in large blood extravasations, and the absorbed hemoglobin is conveyed to the liver faster than it can be transformed into bile pigment, it remains in the circulation and hemoglobinuria results.

Such a condition arises when the hemoglobin in the blood stream exceeds six centigrams per

kilo of body weight and is known as the threshold of renal tolerance.

If hemolysis progresses somewhat more slowly, so that the concentration remains below the threshold value, but higher than the liver can elaborate or secrete as bile, icterus appears, associated with urobilinuria.

Such conditions are encountered clinically in the so-called hemolytic jaundice.

The question naturally arises here, whether this condition is due to a plus, in the splenic function of hemolysis, or a minus in hepatic biliary elaboration.

That the spleen plays an important part in experimental hemolysis as carried out in animals, has been sufficiently demonstrated, and the splenic factor in the hemolytic anemias has been sufficiently attested by a vast clinical experience.

In splenectomized animals the red cells manifest an increased resistance to hypotonic salt solutions for a period of a year at least, and similar reports have been made in man, but so far as I am aware, have not been sufficiently carried out with reference to the condition for which the operation was done.

Various toxic substances, such as saponine, ricine, toluylendamine, certain bile salts, and hemolytic sera injected into the blood stream in animals, produce marked hemolysis, icterus, anemia and in many instances fatty degenerations of parenchymatous organs.

If the dose is sufficiently regulated and used for a sufficient time, hyperplastic and aplastic changes result in the bone marrow, and the circulating blood assumes the character of the hemolytic anemias.

Most of these substances probably owe their activity to the presence of unsaturated fatty acids in their composition.

A similar substance has been isolated from the proglotides of the bothriocephalus, and the pronounced anemia in this condition is undoubtedly due to the absorption of this hemolytic poison by the host.

It has been shown with striking constancy in these animal experiments, that splenectomized animals bear these poisons much better than normal controls; the hemolysis, anemia and icterus are less conspicuous and the fatty degenerations not so marked.

The presence of the spleen then increases the hemolysis of the red cells under these conditions, perhaps by the exercise of its hemolytic function on erythrocytes which have already been sensitized by these toxic substances.

Studies of the blood in splenectomized animals

have revealed some very striking evidence of the nature of these hemolytic agents.

Here again attention has been directed to the study of the unsaturated fatty acids, and the substances which are known to counteract hemolysis, viz., fats and cholesterine.

They have shown after splenectomy a very remarkable and constant decrease of the fatty acids with increase of the fats and cholesterins.

The application of this method to the study of the blood of patients suffering from the hemolytic anemias has shown a remarkably high content of these acids, and the proof lies very near that they are the active agents responsible for the increased hemolysis existing in these states, and explains the clinical improvement resulting from splenectomy under these conditions.

Not only the withdrawal of the hemolytic substance but the increase of the cholesterine and fats undoubtedly play an important role in the increased resistance of the red cells which follows this operation, and, indeed, one is led to inquire if the balance of these two antagonistic substances in the blood serum, and their control in some manner by the spleen, is not responsible for that marvelous adjustment of blood destruction to blood formation which maintains a constant of five million erythrocytes per cubic millimeter of peripheral blood.

The application of this method of study to the post hemorrhagic and splenotoxic anemias, it seems to me, might yield fruitful results.

The third group I have distinguished as the hemoplastic group because the peripheral blood shows an increase of cellular elements, in the polycythemic cases in the red cells chiefly, and the leukemic, the whites.

It is very doubtful if the spleen plays any essential part in the production of these conditions. Certainly its removal has not produced any improvement.

It is barely possible that the normal splenic function of leucocytic inhibition is at fault in leukemia.

Such a conception would be in harmony with the lack of improvement following splenectomy, since this function is a negative one, and would accord well with the splendid results, amounting in some cases almost to a cure, produced by the X-ray treatment of the spleen in this condition.

In the neoplastic group, it is remarkable how little effect is produced on the blood. It is only when cachexia has supervened that marked evidences of blood changes occur.

Splenectomy for these neoplasms is followed by the blood picture which occurs after removal of the normal spleen.

According to the pathological and clinical knowledge as well as the experimental evidence which we possess relative to the splenic factor involved, I have extensively reviewed the literature, and tabulated the results with reference to the practical application of splenectomy to these conditions. (See table.) Among these are included one case of the Gaucher type of splenic anemia in which we were able to make a clinical diagnosis which was confirmed by pathological study of the spleen after operation and one case of lympho-sarcoma of the spleen removed by Dr. Fay.

The former case was followed by a marked polycythemia which still persists after fifteen months. The clinical improvement, while evident, has not been so marked as in the usual splenic anemic type, a disappointment so common that since we are now able to diagnose the condition clinically, it is seriously questionable whether the operation is justified.

The case of Dr. Fay's was an enormous spleen, $8\frac{1}{2} \times 5\frac{1}{2} \times 4$ inches with involvement of the retro-peritoneal lymph glands, but notwithstanding the extreme condition of the patient, showed a red count of four million at the time of operation.

The red cell count increased to five and a half million within a few days after the operation, but the patient succumbed after a few weeks.

Aside from the Gaucher type which I have with small show of reason included in the splenotoxic group, believing however that it is not a neoplasm but a hyperplasia of the endothelium of the venous sinuses, the results of splenectomy in this group have been exceedingly gratifying, amounting in most cases, which withstand the operation, to complete cure, and confirming the opinion that notwithstanding the variable pathology of the organ, we are dealing with a primary disturbance of the internal secretion of the spleen, and that this disturbance reveals itself, not in an increased hemolysis of red blood cells, but in defective stimulus to both white and red cell formation in the hemopoietic tissues of the body.

The salient feature of the second group is the evidence of increased destruction of red blood cells.

In the case of the hemolytic jaundice the cause of this is to be sought in the increased fragility of the red blood cells, and emphasizes the importance of testing the resistance of the red cells to hypotonic salt solution in all these conditions.

That the hemolytic function of the spleen is the factor in this condition is evidenced by the fact that almost immediate and permanent cure results from its removal.

| | | | Special Pathology |
|------------------------------------|---------------------------------------|--------------------------|--|
| A—Splenotoxic Group | | | |
| Name | Synonym | Age | Spleen |
| 1 von Jack's Anemia | Infantile Pseudoleukemia | 1-3 | Hyperplastic |
| 2 Gaucher's Type | | Young | Endothelioplastic |
| 3 Lymphomatous | | Young | Lymphoplastic |
| 4 Banti's Disease | Splenic Anemia with Hepatic Cirrhosis | Young | Heteroplastic |
| 5 Egyptian Type | | Young | Hyperplastic |
| B—Hemolytic Group | | | |
| 1 Splenomegalic Hepatic Cirrhosis | Hanot's Cirrho. Biliary Cirrho. | 20-40 | Lympho-Endothelio plastic |
| 2 Splenomegalic Pigment Cirrhosis | Bronzed Diabetes Hemichromatosis | ? 30-60 | Hyperplastic and Pigmented |
| 3 Hemolytic Jaundice | Congenital Type. Acquired Type. | Infant To Adult | Very Hyperplastic |
| 4 Pernicious Anemia | | After 35 | Slightly enlarged 300—500 Gms. |
| 5 Aplastic Anemia | | Before 35 | ? |
| C—Hemoplastic Group | | | |
| I Erythrocytosis | Vaquez' Disease | Mid-Life | Hyperplastic |
| II Leucoplastic | Leukemia | Mid-Life | Myeloplastic—Very Large—Embryonic |
| D—Neoplastic | | | |
| I Malignant Sarcoma Lymphosarcoma | | Early Life Early Life | Large and Irregular Large and Irregular |
| II Benign Cystoma | | ? | Large Fluctuating |
| Lymphangioma and Cavernous Angioma | | | Large, Sometimes Pulsating |

(Table Continued from Above)

EVIDENCES OF HEMOLYSIS

| Norm. .0047% Resistance of Reds | Urine | Icterus | Fats and Cholesterol in the Blood | Unsaturated Fatty Acids in Blood | Hemolysis |
|--|---------------------|---------------|-----------------------------------|----------------------------------|-----------|
| A-1 1 | 0 | May be Slight | * | * | No |
| 2 1 | 0 | 0 | * | * | No |
| 3 1 | 0 | 0 | * | * | No |
| 4 1 | 0 | Sometimes | * | * | No |
| 5 1 | 0 | Sometimes | * | * | No |
| B-1 1 | Bile | Yes | Rather Low | High | Yes |
| 2 1 | ? | ? | Fats High Chol. Little High | Low | Yes |
| 3 1 | Urobilin | Yes | Normal | Very High | Yes |
| 4 1 to 1 Plus Pale | | Icteroid | Little High | Very High | Yes |
| 5 Probably same as pernicious but no reports available | | | | | Yes |
| C-1 About 1 | Sometimes Urobilin | 0 | About Normal | Very High | Yes |
| 2 ? | Uric Acid Very High | None | ? | ? | ? |
| D-1 * | * | * | * | * | * |
| 2 * | * | * | * | * | * |

| Special Pathology | | Hematology of Peripheral Blood | | | | |
|-------------------------|----------------------------|--------------------------------|-------------------|-------------|------------------|-------------------------------|
| Liver | Bone Marrow | Reds | Hemoglo. | Index | Leucocytes | Differential |
| * | ? | Low | Low | 1— | ? | ? |
| Large | Endothelial Hyperplasia | Little Low | Little Low | 1 | Low | Polys. Low |
| * | Secondary Hyperplasia | Low | Low | 1— | Low | Polys. Low |
| Cirrhosis Late | Secondary Hyperplasia | Low | Low | 1— | Low | Polys. Low |
| Cirrhosis Early | Secondary Hyperplasia | Low | Low | 1— | Low | Polys. Low |
| Very Large | ? | Little Low | Little Low | 1 | Sometimes High | Polys. High |
| Large Pigment | ? | Low | Low | About 1 | ? | ? |
| Sometimes Enlarged | ? | Low | Little Low | 1 | ? | ? |
| Sometimes Enlarged | Erythroblastic Hyperplasia | Very Low | Low | 1 Plus | Low | Polys. Low Lympho. High |
| ? | Aplastic and Fatty | Very Low | Exceedingly Low | 1— | Very Low | Polys. High Lym. Very High |
| Moderately Large | Hyperplastic | Very High | Comparatively Low | 1— | High | High Absolute and High Polys. |
| Large and Regular | Hyperplasia Slight | About Normal | Low | 1 | Exceedingly High | Myelocytes or Lymphocytes |
| Only Rarely Secondarily | * | Secondary | Anemia | Occurs late | | |
| No Involvement | * | No Blood | Changes | | | |
| " | * | " | " | | | |

(Table Continued from Above)

RESULTS OF SPLENECTOMY

| No. of Cases | No. of Deaths | Results and Remarks |
|--------------------|--------------------|--|
| 3 | 1 One Month Later | Good, but generally recover without operation by the third year, 60-70 per cent. |
| 12 | 2 in 10 | Disease usually progresses. Without operation usually live for years. |
| 2 | ? | ? |
| Total With Above | 18 9? | In this group 82 reported cured, 18 died and 9 unknown. |
| 111 | | |
| 22 | 4 | Operation of unquestionable value. |
| 9 | ? | Three cases reported cured. Operation of doubtful value. |
| 3 | 1 in 48 hrs. | Uncertain. |
| 22 or 24 2? | 1 | Splenectomy gratifying results, but many cases suffer no inconvenience. |
| 37 | 8 Immediate Deaths | Most cases which survive are improved but none cured. |
| 0 | 0 | Splenectomy could do no good. The bone marrow is aplastic. |
| 4 Reported in 1908 | 4 | One lived 16 months. Operation contra-indicated. X-ray and Benzol indicated. |
| ? | ? | In chronic aleukemic cases with painful movable spleen, sometimes indicated. |
| 17 | ? | Seven of these remained cured for some time, 4-6 years. |
| ? | ? | Splenectomy indicated in most cases. |

In pernicious anemia, on the other hand, the resistance of the red cells is above normal, and while *post hoc ergo propter hoc* arguments, are of doubtful value in the polemics of science, yet one can not escape the conviction that whereas both hemolytic jaundice and pernicious anemia show a high content of hemolyzing unsaturated fatty acids in the blood, the latter condition alone reveals a corresponding increase in its fatty content, and since this has been found constantly associated with the increased resistance of the red blood cells following experimental splenectomy in animals, it seems reasonable that it is a factor in raising their resistance in this disease.

The pathological and clinical evidence seems to indicate that the cause of pernicious anemia must be sought outside the spleen, and that the temporary improvement in the blood state following splenectomy in this condition is due to the withdrawal of the hemolytic function of the spleen, which may indeed be increased, but which nevertheless is not the primary factor at fault.

The primary operative mortality has been so high, and the ultimate results so disappointing, that it seems doubtful if the operation should be undertaken except as a measure of temporary improvement where it has a place of undoubted value.

Of the remaining splenomegalies, both theoretical speculation and practical experience has demonstrated that splenectomy is only indicated in the primary neoplastic conditions of the spleen, where the operative results have been truly gratifying, and in the malignant group in the face of an otherwise hopeless outlook.

In presenting this subject for consideration, I hope that the paper may be considered as suggestive rather than academic, and that it may encourage the effort on the part of our profession to fill in the vast lacunæ in our knowledge of splenic disorders, and at the same time stimulate a closer study of the hematology associated with these conditions, which alone can serve as a criterion of clinical classification and therapeutic endeavor.

Discussion

William Jepson, Sioux City—The essayist has so ably set forth the factors upon which is based our present conception of the physiology as well as the pathology of the spleen, that there is nothing any one could say along this line that would further elucidate the topic.

The spleen, of course, in common with every other organ of the economy, intrudes itself upon our attention only when, first, it has become of such a size or the seat of such a degree of pain that our attention is directed to it, or second, when its pathological condition has led to such a distur-

bance of function, occasioned by pathological states, arrests our attention. Unfortunately for us in the matter of thereby discovering of splenic lesions or pathology, it does not force itself upon our attention early because of its concealed position. Hence, it is oftentimes of fair size before our attention would possibly be directed to it. Secondly, as its function is related to that of the blood, it again will often escape attention unless we are constantly on the alert to recognize any disturbances of the normal.

During the few moments that I shall occupy your attention, I desire to speak especially of splenic enlargements from the standpoint of differentiating malignant from non-malignant growths.

When a patient presents an enlarged spleen, the question which naturally presents itself for solution is that of the underlying cause, namely whether it is incident to the performance of its function or consequent upon an infection of the organ itself or dependant upon the presence of a neoplasm either cystic or solid.

The rapidity with which the enlargement has occurred, the physical characteristics of the spleen, as well as constitutional symptoms and blood findings, will constitute the basis upon which must rest our conclusions.

Neoplasms will be, with few exceptions, characterized by slow growth—though the rapidity of growth is often problematic, owing to the earliest enlargement being unrecognized—and irregularity of contour, that is in place of being uniformly enlarged it is possessed of a definite area of enlargement, the rest of the organ being of normal shape and size. I question whether it is possible, prior to direct inspection, to differentiate between benign and malignant neoplasm of the spleen, and yet it is absolutely essential that such differentiation be made if the life of the patient is to be saved. This being true, when any doubt exists the patient should have the benefit of the doubt, through which implies celiotomy and direct inspection, and if this does not place the diagnosis beyond doubt, a splenectomy must best serve the interests of the patient.

That such procedure may be rewarded by most satisfactory results is well illustrated by the case of a young girl, age fifteen who came under my observation at the university hospital, some ten or eleven years ago, presenting a splenic enlargement which was not uniform. She was subjected to a celiotomy for the purpose of direct inspection, which showed the presence of a definite growth in the spleen and which led to its removal. Microscopic investigation showed the growth to be a fibro sarcoma. The girl made an uneventful recovery and when I last heard from her she was married and the mother of two children.

The number of cases of primary sarcoma of the spleen then reported from all sources were about thirty, of which eleven had been submitted to splenectomy, of which number there were then living two.

W. L. Bierring, Des Moines—The pathology of this subject has been so well covered by the paper

that it requires no discussion. From the classification accompanying this paper we have a very good guide with reference to removal of the spleen in these different conditions. There can be but little doubt that in the first group and also in the last group, a splenectomy is distinctly indicated, and again perhaps in the second group in selected cases, but it has no place in the third group.

With reference to removal of the spleen in pernicious anemia, we have as yet no reason to award to splenectomy any specific results, as in the records of splenectomies thus far published sufficient time has not yet elapsed to permit us to say that splenectomy is a distinct cure for pernicious anemia. However, I think this much can be said; that splenectomy in pernicious anemia brings a remission or improvement, and in that sense perhaps is indicated in certain cases. This is the best that can be said for it at this time, and, as explained by the essayist, such improvement is dependent on the fact that the spleen has certain hemolytic action, and in its removal a distinct increase in red cells results. But I am sure that we will always find instances in which there will be just as much improvement from drug measures as from splenectomy.

I would like to cite an instance of an extreme case of pernicious anemia in which the blood count was as low as 500,000, and in which I urged my surgical colleagues to have the spleen removed. I told them the individual was in an extreme condition, that the operation could probably be done rapidly, and would bring about a remission or improvement. But I was unable to prevail upon them to see it in this light. I was therefore dependent upon the usual medical measures, yet in eight weeks the man walked out of the hospital with a red cell count of three and one-half million, feeling quite strong, and at last reports was still living. I then could remind my surgical colleagues of the opportunity that had been missed.

Dr. Sanders—I hesitated whether or not to include pernicious anemia among the chronic cryptogenetic splenic tumors. As a matter of fact the spleen is little enlarged in pernicious anemia. A year ago, Moffitt, was able to show that out of ten of these cases the spleen was increased in weight from fifty to one hundred and fifty grams. Therefore I have included this type in the group of chronic cryptogenetic splenic tumors.

In regard to surgical removal of the spleen for pernicious anemia, I think we should take this attitude: First, it is a matter of clinical observation that there comes a time in every case of pernicious anemia when the disease will not respond to the usual therapeutic measures. After these measures have ceased to be efficient and after the usual response has failed. I believe the results of splenectomy justify the operation, although the condition may be extreme. It is remarkable, the extreme condition of a number of these cases, which have withstood in a reasonable manner the operation of splenectomy, and in which almost invariably the red

blood cells have been increased, the hemoglobin has been increased, and the patient given a respite of a period of a few months.

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THE DIAGNOSIS OF OSTEOMYELITIS*

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A correct diagnosis of any malady is a prerequisite to rational treatment. Without a correct diagnosis we are only groping in the dark. In all branches of medical practice the importance of diagnosis is everywhere emphasized. Witness modern team work where every diagnostic measure is exhausted before treatment is begun.

Progress in treatment has come not alone through a *correct* diagnosis but through a *correct early* diagnosis. Our treatment of tuberculosis was of little avail until we learned to make the early diagnosis. The same may be said of appendicitis. It is now the exception to find a general practitioner who does not make an early diagnosis of appendicitis. With the exception of acute conditions arising within the abdomen calling for surgical intervention there is no condition in which the *early* diagnosis is so important and in which delay is so fraught with disastrous consequences as in acute infectious osteomyelitis.

Samuel Gross, writing half a century ago, says: "Endosteitis cannot be considered otherwise than as a dangerous malady; for when severe or wide spread, it is apt to cause extensive necrosis but it may destroy the patient by the induction of phlebitis in the principal veins of the corresponding limb, and abscesses in the different viscera, especially the lungs and liver." Gross remarks in this connection that "if there is reason to apprehend the existence of medullary abscess, as there will be if there is deep seated, aching, gnawing, or boring pain, with edema of subcutaneous cellular tissue, the surgeon must not hesitate to cut down upon the matter with a small trephine as the *only chance* of averting still more serious consequences."

It is a long way from Samuel Gross and his clear clinical descriptions to our present day pathology and bacteriology of osteomyelitis.

While the X-ray and microscope are valuable aids in diagnosis, acute infectious osteomyelitis *can* and *should* be diagnosed *early*, single-handed and alone by any general practitioner.

If we keep in mind that the usual mode of entrance of germs to the seat of disease is through the blood stream, and remembering the peculiarities of circulation in growing bones, we have a rational explanation of the frequency with which pyogenic foci become located near the epiphyseal lines in children and young adults.

In this brief paper no reference is made to the

diagnosis of chronic osteomyelitis for here the element of time is not so important and errors in diagnosis are not so common.

A few simple facts constantly borne in mind should lead us to an early diagnosis.

1. That acute osteomyelitis is a germ disease.
2. That the symptoms are essentially those of acute infection and sepsis.
3. That the disease is confined to a large extent to children below the age of puberty.
4. That the onset is usually announced by a chill followed by high fever and rapid pulse.
5. That the focus is generally in one of the long bones with intense local pain and can generally be discovered early.

In searching for the tender point, firm continued pressure should be made in the neighborhood of the suspected epiphysis.

So long as we find many cases of acute osteomyelitis diagnosed as rheumatism and the innocent sufferer drugged with salicylates and so-called anti-rheumatics, just so long must we continue to hammer away at early diagnosis.

Rheumatism is the diagnosis of the lazy, slipshod, snap shot doctor. He should be classed with "Grandma" who has already made the diagnosis of "growing pains."

Discussion

William Jepson, Sioux City—I desire to discuss this paper only because I feel that there are a few points which can not be emphasized too strongly, namely the making of a correct diagnosis and making it early.

Probably there are few areas wherein the management of an infection is so important in its early stages as in the medullary cavity of bone. Why? Because we realize that every inflammatory process threatens the patient with death from toxemia, and that danger always is in proportion to the virulence of the germs, their number, and the tension to which the inflammatory product is subjected.

Hence, in the medullary canal surrounded by dense bony structure, in which no adequate exit for the inflammatory products exists, we have conditions which are ideal for an early fatal result from toxemia. The dangers of an osteomyelitis are not alone those of the patient being threatened with death and that early, but those of local destruction of bone tissue through the inflammatory exudate closing the lumen of vessels in the haversian canals, thus leading to a greater or less necrosis of bone, and its consequent disabling effect. Hence, these patients are threatened with two dangers, constitutional and local. These dangers can only be minimized by early recognizing the condition and affording exit to that inflammatory exudate. How? By at once thoroughly opening the medullary canal of the bone involved.

Charles J. Rowan, Iowa City—I agree that the most important points to be considered in this dis-

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ease are those of early diagnosis and early treatment. I do not think we can over-emphasize the fact that so many of these cases being diagnosed as rheumatism is a very great reflection on the medical profession. Dr. Kenefick is also correct in emphasizing that in this disease the treatment must be founded upon careful examination, not taking things for granted. And still, I would not say that the microscope is not important. By the time the X-ray shows any trouble with a bone, it is too late for operation. But there is one class of cases in which laboratory examination is very important, and that is those cases in which the child has a very severe multiple osteomyelitis, when the sepsis produces such a stupid condition that the child scarcely complains of the pain and tenderness. A case of that kind is apt to be called, for instance, typhoid fever. In those cases the microscopic examination becomes of great value as to the degree of leucocytosis, because even early in those cases you will almost invariably have a high leucocytosis. And even though the child does act like a typhoid patient, as they will, examination of the leucocytes will immediately indicate that the condition cannot be typhoid. And then we can search for further differential points, and in some of these cases it will require a careful search to determine that the disease is an osteomyelitis. But in this event we have all the greater reason for early operation, because in the simple cases, if only a single bone is involved and the child is not so profoundly septic, early operation means saving the child from being crippled for life, whereas in the very profound cases an early operation is necessary to prevent death.

D. S. Fairchild, Clinton—In the consideration of these cases, we all, I think, understand the importance of early diagnosis, and we all understand the necessity of early treatment. It occurs to me that in this discussion, then, there is only one point we need to take into account, and that is the question of rheumatism. Why should we call everything that involves a joint or is situated in the neighborhood of a joint, rheumatism? If we can eliminate the question from our minds, establishing the diagnosis of rheumatism through proving it to be the case, by the most careful inquiries, then we shall not be in danger of making a mistake in the treatment of this class of cases. We know perfectly well that acute osteomyelitis ought to be treated early, and it is only the question of rheumatism that stands in the way of our coming to an absolute conclusion as to what is the matter with the patient.

D. C. Brockman, Ottumwa—We hear a great deal about early operation in osteomyelitis, but it is not always stated just what is meant by the term "early operation" as applied to these cases. We mean **now**—not this afternoon, but right away.

The majority of these cases that come to me have, for a period of three or four days, been treated for rheumatism. Rheumatism never causes such acute pain as does osteomyelitis. The single point of severe pain with high temperature near a joint, means

osteomyelitis, never rheumatism. In rheumatism motion of the joint affected will cause intense pain. Not so in osteomyelitis; moving the joint does not cause pain, but there is tenderness over the end of the bone which causes pain. Osteomyelitis is nearly always in the child. Diagnosis can be made in three hours after onset of the trouble, and must be soon made to get results. Then when the diagnosis has been made, operation must be **now**.

But what if we first see the case four, five, or six days after operation should have been done? Then we must not operate. The pus has come through and is being discharged. If drainage is not perfectly free, open and make it free and then let the case alone until the sequestrum forms and separates. The danger lies in the fact of seeing the case too late for an early operation and too early for a late operation. If you are going to wait, wait for the sequestrum to form.

As to differential points in diagnosis, tuberculosis of bone never comes on in the same way as osteomyelitis. It is always pus production that causes severe pain and high temperature, never rheumatism. Rheumatism is never located in one joint alone. It may be that a specific infection in one joint is causing pain, but this condition is not found in children.

The most important point is to make prompt diagnosis. It can be made in three hours after onset of the disease, and if you wait longer than the second visit you are doing that patient irreparable harm.

L. W. Littig, Davenport—Just one point in connection with what we are to do **now**. We were told, a moment ago, to make free incision, opening the medullary cavity with a chisel. That is a good practice, of course, but it is not necessary **now**, and every man can not do that, as those of us practicing in the country know very well. The best immediate procedure is to make a small incision, and then make an opening in the bone with a bone-drill. We all can do that. It is sometimes advisable to do this "on suspicion," when not sure whether the condition is rheumatism or osteomyelitis; it is hardly an operation, and will give the necessary immediate relief.

E. H. King, Muscatine—Dr. Brockman made a point in regard to rheumatism. It was early taught that pain and distress in one joint alone was not rheumatism, and to look for local infection.

One factor in diagnosis of osteomyelitis was not dwelt upon; the boring, intense pain at night, almost invariably occurring in these cases.

Dr. Rowan alluded to typhoid fever. In my experience several cases have occurred in which I am satisfied that the so-called bone infection following typhoid fever was due to osteomyelitis, caused by infection of the medullary cavity of the femur in one case—hip-joint disease it was originally miscalled.

C. F. Wahrer, Fort Madison—I have a formula which is a panacea in the making of diagnosis: That any man should hesitate before making a diagnosis of rheumatism, malaria, or general debility.

Dr. Kenefick—In regard to early diagnosis in these cases, I do not wish to be understood as de-

siring to minimize in the least degree the importance of the microscope in taking the leucocyte count whenever it can be done. My paper was written chiefly for the general practitioner, the country doctor, who usually is not prepared on the spot to make a leucocyte count. Of course the younger men, those who have come out of school within the past ten years, have been taught to do this and can do it. But if we have not the means at hand to make the leucocyte count in these conditions, I believe in treating them on suspicion. As a friend of mine, an old country doctor, said not long ago when we were debating as to the diagnosis of a case of appendicitis and a young fellow wanted to go a long distance after a microscope and some paraphernalia with which to make the leucocyte count: "Let us get this rotten appendix out and you can make your leucocyte count tomorrow." That was good sense.

I want to thank the surgeons of experience who have discussed this brief paper. I feel that the subject is of great importance from the simple fact that I have seen, within the past twelve months five cases of acute infectious osteomyelitis, with four deaths. That is an appalling mortality rate when we come to figure percentage, and one which should not prevail in our practice today.

CO-OPERATION: WHAT DOES IT MEAN?*

CLINTON E. HARRIS, M. D., Grinnell

I have chosen this title as a vehicle to eliminate whatever heresies I may have in my system and to convey me into whatever depths I may choose to flounder. Lest I stand in need of defense, let me say that while I come before you as a critic, my criticism is flavored with the sauce of an optimist, albeit somewhat tintured with discontent. And when I have finished, should you murmur, "dreamer," "idealist," I shall make no complaint. For I hold that nearly all that is good and great in the world has come from capitalizing dreams into achievement, and if I can conjure you, never so slightly, to dream of a new era for the medical profession of Iowa, I shall be content.

The word co-operation may suggest a somewhat sinister, selfish idea,—a not unnatural conclusion in view of our proverbial helplessness in guarding our material interests. Viewed in its broadest light, it means much more. We shall not properly appreciate its significance until we consider it both from the standpoint of society and of the individual physician.

The rapid evolution of social and economic conditions has brought new problems to the doctors. If we survive and fulfill our mission, we must steer a circumspect course between the

Scylla of personal neglect and the Charybdis of disregard for our obligation to the public. Greatly as I revere the memory of the doctor of the old school, I cannot sincerely regret his passing; and happily, the public is becoming reconciled to the idea that physicians have as much natural right to live and prosper as other individuals.

It is almost universally true that genuine reforms inflict some hardship on certain classes. The enactment of a workmen's compensation act is a case in point. No wiser, saner law, in principle, ever passed our legislature. As a result of failure to co-operate properly, however, a large part of the medical profession of Iowa are being exploited by insurance concerns operating under this law. In many communities the surgical treatment of injured employes has been let by contract at fee schedules which are shamefully low. In short, the manufacturers have applied the principle of co-operation and have, in most instances, caught the doctors off their guard. The result is low fees, and in many instances, the diversion of patients from the physicians of their choice. I do not wish to criticise unduly business concerns for attempting to handle their insurance on a contract basis, for in so doing they are but following a natural course; but I do criticise our profession for not having met co-operation with co-operation. The physicians of Poweshiek county do no work under the compensation act at cut-throat rates. We have leagued ourselves solidly against contract practice and we confidently expect the agreement to stick. In Grinnell, for instance, no less than six physicians, possibly more, handle the casualty cases, and they are getting decent, respectable fees for their work. We believe that co-operative sauce is equally good for the manufacturing goose and the medical gander.

Another problem deserving our consideration is that of county poor work. Based, doubtless, on the ancient idea that a physician is a healer devoid of any business sense, it has been the practice of nearly all counties to let the work at a low contract price or to cut the physician's bills in two. The bills of the grocer and butcher suffer no discount. I cannot believe that we need bear this injustice if we will but stand together for our rights. This we have determined to try in Poweshiek county. During the month of April we served the following notice upon our board of supervisors:

The undersigned physicians, resident in Poweshiek county, hereby give notice of the abrogation of any previous agreements or contracts with your board relating to the treatment of county poor patients.

Read before the Sixty-Fourth Annual Session, Iowa State Medical Society at Waterloo, May 12, 13, 14, 1915.

On and after the first day of May, 1915, we shall not, save in emergency cases, render service to county poor patients without a written order for such service from the constituted authorities of our several communities. All bills presented for such service after the date of May 1, 1915, will be rendered at the usual rates prevailing in our several communities.

This notice was signed by thirty physicians and osteopaths representing practically every man in active practice in the county. It is yet early to predict the result of our action; but we await the issue with confidence. And let me add, that if a contract physician is imported, we shall try to see well to it that he does all the work stipulated in his agreement.

There are many lines of endeavor on which physicians could co-operate legitimately without, in any way, lowering their professional efficiency or ethical standards. In the course of this brief paper, I wish, however, to direct your attention to the broader question of medical co-operation as related to society. I, for one, am not content to rest on the heroic sacrifices of days that are gone. They belonged to an age in which individualism was more dominant. The cry of the present period is that of social service. The church, for a time concerning itself largely with religious abstractions, fell into disfavor; it is winning its way back to approval by practical efforts to crystallize religion into service. As individuals we may serve our fellows splendidly by making the most of scientific achievements; as a profession, medicine cannot remain in the vanguard of progress unless we more effectually influence social and economic conditions about us. The storied legends of the past had their place in an individualistic age; the epitaph of our progress in this century will be determined by the effectiveness with which we carry our teachings to the people. This confronts us with the question of legislation.

The indifference of the public to problems of health and disease is proverbial; likewise their hostility to the efforts of physicians to institute better sanitation. For many years, when I have considered the ceaseless efforts of doctors to eradicate the very conditions upon which they depend for a livelihood, I have been utterly unable to understand the public's unfriendly attitude. A large measure of explanation was offered for this paradoxical position in a recent statement of Vice-President Marshall, when he said, "You cannot have efficiency and freedom side by side. You must sacrifice the one for the other in government." Under a bureaucratic system of government, many reforms would easily be achieved for which we must patiently wait unless we change our procedure. We have

soothed ourselves with the thought that we must wait for the public to be educated before we can institute reforms. Have we so much as begun to realize our possibilities for the advancement of public health in Iowa? This then, is my excuse for this paper: That while we may be theoretically agreed upon the need of co-operation, we have not come to a proper realization of what co-operation really means. My challenge is this: that co-operation implies leadership. And the medical profession of Iowa has as yet no adequate leadership; no leaders who have been able to quicken the profession to an appreciation of our social and political obligations. My appeal lies not primarily to the rank and file of Iowa physicians but to the medical and surgical stalwarts of the Hawkeye state. I greet them not with invective; nor do I demand that the rascals be turned out. On the contrary, convinced of the inherent worth of our present leaders, speaking, as I believe, for hundreds of country physicians, I appeal to them that they be born again into a new consciousness of social ethics,—in a word that they collaborate their talents for a campaign of medical education and legislation which will lift Iowa out of its shameful position in the army of public health.

We cannot fail to note the radical change in sentiment on matters of political and social import. Never was there a time when man was so much his brothers keeper as the present. The veriest pessimist cannot ignore the tendency to moral and political betterment. The great danger threatening the profession of Iowa is not that they shall fail to stand together adequately for mutual defense, but that they shall fail to co-operate in assisting their lay brethren in furthering the great movement for sanitary and social regeneration. The procession is moving and we are, as yet, in no true sense, an integral part of it.

I believe in democracy; but democracy without leadership is futile. I hope to see the medical profession of Iowa, play its full part in the betterment of our great state; but this it cannot do without real leadership. Whatever of strength, whatever of talent there is in men, must declare itself when they are convicted of the imperative duty of service. I am neither unconscious nor unappreciative of the sacrifice which some of our valiants have made. Neither do I forget that Iowa has moved forward along the highway of public health. But when I contemplate the men of real calibre who are scattered over this commonwealth; when I think of their possibilities for good, I cannot resist the conviction that they have fallen short of their real heritage. Despite the bitter prejudice and rancor of lay critics, the

time is ripe for a real health revival in Iowa,—a revival that will restore much that has been lost and give us added inspiration for future endeavor.

But what, you ask, of suggestions for betterment? Criticism which points no remedy, or suggests no definite policy, is prone to prove invalid. Let me say at once that I fully appreciate the work done in past years by our legislative committees for the betterment of public health. Their zeal leaves nothing to be desired. I simply assert that they have been obliged to work under an inefficient system. Unskilled as I am in politics, I beg leave to suggest the following plan as an entering wedge. Things are evolving in American life, and politics is evolving with the rest. The day of the pussy foot statesman is passing. We are entering an age of candor. Instead of delegating its legislative work to a committee and washing its hands of the matter, the State Society should officially take cognizance of our public health needs and formulate, if you please, a legislative budget, just as our educational institutions present to the legislature a budget of their financial needs for each biennial period. This budget should approximate an ideal; or, if policy dictated, we could concentrate every two years on some one or two questions. Instead of waiting for the legislature to convene and passing the entire burden over to one committee, we should openly and above board go before the people of the state, through proper organization, and with untiring energy solicit their support for our plans. Candidates for office should be interviewed, not with the ancient idea of pledging them to definite action, but that they may, in proper season, removed from the rush and turmoil of a legislative session, receive careful instruction regarding Iowa's public health needs. Let it be known of all men, that we, the physicians of Iowa, working under our efficient leaders, are striving to attain certain ends and that, having our quarrel just, we maintain confidence that the people will ultimately give us the victory. Let there be no brandishing of the big stick, but rather let it be known, that having galvanized our latent energies into action, we of the medical profession are determined, by sober but insistent counsel, on giving Iowa a new deal in public health.

When I note the absence of large clinical centers in Iowa, I am proud of the eminence so many of our brothers have attained. They reflect credit on the entire state. But times change, new standards arise. Fundamentally there are no political problems, no social problems, no problems of health; for all problems relating to society are

in the last analysis, moral problems. I care not, you stalwarts, what be the finesse of your scalpels or the skill of your diagnostic fingers. Though fame and wealth come to you in abundance, you shall not attain your rightful eminence, unless you give of your talents and energies for social betterment. I appeal to you not as to men who have shirked your duty, but as to men who have entertained no adequate conception of your possibilities for good.

The ethics of the past rested on the injunction "Thou shalt not;" the ethics of the present is based on the postulate "Thou shalt." In the brashness of my inexperience I say to you: "Co-operation implies leadership. The privates in the ranks are ready. Will you lead us?"

Discussion

Pauline Myers Townsend-Hanson, Marshalltown—This, to my mind, is one of the most important papers that could be brought before us. In addition to the suggestions made by the writer of the paper, I want to add this: Considerable tax money is now and has been for years past paid out for public health work in Iowa, to be carried out by county and city physicians and others, some of whose salaries are \$600 a year. In talking with various physicians and debating as to why more work was not being done along the lines of prevention by physicians who receive salaries from the public funds, the subject of political influence came in as a matter of course. Many of these appointments of city and county physicians are given to men who have heeled well in some political party, and, having gotten the position as a plum of political victory, they do not feel compelled to fill the position as efficiently as they otherwise might. To use the words of one officer, and I am not saying this in any condemnation of this officer, for he was just as good in his line and did his work as well as did many others and perhaps better, but merely because the incident pertains to the subject under discussion; but the reply made by him when some agitation was started for a particular public nuisance to be abated, was this: "I am not looking for trouble and I am not doing any more work than I have to."

As a remedy for these conditions, I would suggest this: That in every county where there is a county medical society and where the public through their tax money pays out any fees or salaries whatsoever in the interest of public health, such county medical society provide that reports shall be received by it from each one of these public officials setting forth the medical and public health measures that have been carried out by them. Let each county society in the State of Iowa have a conscientious regard for what the health officers of its county are doing, and let the health officers of the various counties and towns report to their county medical societies, when these societies can take co-operative measures in regard to the public health service rendered to the people.

Are we to expect the lay public to be able to criticize intelligently the medical work of its medical officers? If we of the county medical societies, who are able to do so, do not do this, then what else are we to expect but that these officers will look upon the office more as a matter of political graft than one of service, and that they will, as this particular officer said, not "look for trouble," but do just as little as possible for just as much money as possible?

J. G. Roberts, Oskaloosa—I want to congratulate Dr. Harris on his Utopian dream, but I fear he has a long, hard road to travel before he reaches its materialization. In a democracy we must have political parties and must make use of the tools that are given us.

I believe the doctor is wrong in saying that the rank and file are ready to follow the leaders, for the leaders have been laboring hard and long. And, as one of the rank and file of privates, I may say that Dr. Harris is mistaken—he is one of the leaders. He does not know perhaps that he has been promoted, but he has, and his whole trouble has been in trying to prod the rank and file up to the point that they will follow the lead in this work, and that is the trouble he will continue to have.

As representing a county which has probably taken the most advanced stand of any along public health lines, I believe I can speak with some degree of authority upon this subject, and I can say that we must use politics. We cannot make any broad and sudden changes along these lines, but must educate the people up slowly and gradually. The regeneration of a community along these lines frequently must come as in the case of the individual, through suffering. I believe the stand that we of Oskaloosa have taken in the employment of a trained bacteriologist as a whole-time health officer, is because of the suffering caused by a disastrous epidemic of typhoid fever. The leaders saw fit to broach the subject at a time when the members of the community, through their pocket-books, had been touched. After the epidemic was over the plan was put through without any trouble and a laboratory fitted up, with an all-time worker in command. This is more than many people expected could be done, but we have had to use politics and we are still using politics. We had to have a physician on the council to watch the interests of public health, we have to interview the council at frequent intervals, yet whenever there is a change of administration it must be seen to that they do not throw out all that we have accomplished. We are gaining, but gaining slowly. The community is becoming aware of the necessity of such an office, and we are educating them up to its value. So the time is not far distant when they will no more think of abolishing a full-time health officer than of doing away with the fire department. But it is slow work and we cannot make any broad and sudden changes. We have to take what they will give us, utilize every opportunity that offers, and employ every argument no matter how pitiful or insignificant it may seem, for if we

can prove to the members of the community that it is worth dollars and cents to them we will get what we want.

Thomas F. Duhigg, Des Moines—It is my conviction that we would be better off if we had less operating and more co-operating. That is not meant as a gibe at good surgery, however. And in listening to the reading of the paper I could detect but one hopeful thing. I am reminded of the story of an intoxicated white man who met a colored gentleman on the street, walked up to him and said, "Hello, nigger!" The colored man stretched up and said, "Sir, I'd rather be a 'spectable colo'ed man than a drunken white man." The white man laughed and said, "Yes, that's so, but I'll get over this drunk." And likewise the trouble which the gentleman finds with us is something that we will get over.

Co-operation means operating together, working together. The fact that we are here and have a presiding officer who tells us when to speak and when to quit, is co-operation. The work carried on by this municipality and state and national government, is one of co-operation. If it were not for the hearty co-operation of this Society, we would have a very faulty Chiropractic law upon the statute books of the state. I can testify to this in my own experience. And therefore I do not belittle the influence of this Society and its value as a co-operating body in accomplishing good results. It has great influence when properly directed.

The legislative phase of the subject always interests me. I never was a health officer, and I do not know anything about politics. I have had some experience with legislatures, and I know that a legislator that does his duty is very busy and deserves far more credit than he usually gets. I saw our senator at work when he was on the public health committee, and he ran from one committee room to another—this was a fact, he literally ran from one room to another.

This illustrates how far we must, if possible, carry co-operation. The co-operation in our Society is wonderful. We are congenial, we are educated along the same lines, we sympathize with each other, we understand each other, the arguments we present touch our reason. I do not have any difficulty in getting the doctor to see the proposition in legislation—he sees it readily. But for two and one-quarter million people, legislation is enacted by 108 men in the House and 50 in the Senate. We confine our system of education, then, to 158 men, and we purpose to meet them in the next two years. The first thing to do is to count noses, in the language of the street. You have to separate the goats from the sheep. When you have a vote you have got it. There is no use wasting any time on the men you have, or on the men you can't get. There are three classes: Those that are for you, those that are against you, and those who do not know anything about it. And the latter are the men we must educate, and those we shall meet.

The lady who discussed this paper lives in a county the senator from which is a champion of any

cult that assumes knowledge of health matters. The value of co-operation is to educate senators and representatives. It is unnecessary and impossible to educate two and one-quarter million people outside of the public press. The layman gets a multitude of other matters from the same source. He is usually not interested in and does not know how to make laws on public health. He starts off well, but does not always know where he is going. We have to educate but 158 men.

It is the things with merit in them that appeal. We have right and logic on our side, and in the end we must win, for our appeal is to their reason and our chief concern is the interests of humanity.

In closing I wish to commend the efforts of the other members of the legislative committee. On behalf of the committee I thank you for having selected us as the instruments to mold our influence and direct it into fruitful and humanitarian channels. Your appreciation is ample reward for our efforts.

E. H. King, Muscatine—A little girl was very much exercised about her brother, who had made a trap to catch birds, which she thought cruel and wrong and was very despondent. In a few days she brightened up and was cheerful, and her mother asked what had changed her demeanor. "Well," she said, "I prayed that Johnnie might be a better boy." "What then?" "Then I prayed that his trap might not catch any birds." "What then?" "Then I went out and kicked his old trap all to pieces!"

We can theorize here, we know what ought to be done; but the thing to do is to go home and "kick the trap."

Dr. Harris—The perennially and perpetually fatal fluency of speech with which Dr. Duhigg approaches any proposition, makes it appear that we are much farther apart than the case justifies. As a matter of fact I do not think we are far apart at all.

Fundamentally, I confess, as I did at the beginning, to being an idealist. I want to call attention to one main difference between Dr. Duhigg's brand of politics and the brand I am speaking of here. Dr. Duhigg has said that I want to educate over two million people along the lines of public health. I do and do not. But I emphasized in the paper that **candidates**—not elected senators and representatives, but **candidates** for office—should be interviewed and universally interviewed before election, not waiting until they are all scrambled up in the pot at Des Moines. That is one of the prime defects of our present system. Not with the idea of handcuffing them, but going to them in the clear light of reason before going to Des Moines—where some of them, sad to say, lose their reason—and carrying this proposition of public health to them in a sober and sane way. Personally I want to plead guilty. It is very evident from what Dr. Duhigg has said here this afternoon that we have cause enough in our county to kick against the present system; evidently we have some cause for complaint down there, indeed, yes. I have been advocating this afternoon the principles of doing it early, and I am frank

to say that as secretary of the Poweshieck County Medical Society I have received many telegrams and letters from Dr. Duhigg, which to my mind spoke well for his zeal.

Why should we put ourselves in the position of being a lobbyist at the eleventh hour, working through a committee, when if in advance we announce to the whole state that we are working for these things openly and above board, interviewing senators and representatives first, we may take away the appearance of political chicanery? Dr. Duhigg, acting upon the established usage of professional courtesy, has said some things this afternoon which he would not have stated quite so broadly if this were a lay audience. I am perfectly willing my plans should be printed in any paper or presented to any lay home, and what I have tried to say would not embarrass any member of the legislature in any way if the plan were carried out. I believe it is just a question of doing your co-operating early instead of late and doing it openly and above board, because if you have your principle right, if you have your quarrel just, you are going to get what you go after, they are going to give it to us, and the legislators you have interviewed early are not going to be so timid, are not going to be so afraid of "What will the people think?" if they know that openly, in our press, in our churches, in our schools, we have been going to the people and saying, "Next December at Des Moines we are going to try and get these things across, and these are the only things we are going to try to get across, there will be no eleventh hour measures presented by our committee for medical legislation.

In conclusion allow me to say that I haven't any word of harsh criticism on the work that has been done. From what has been said this afternoon I think it is clearly understood that this is not a criticism of men; it is a criticism of method. I do believe that our method is wrong, but I think the men are all right.

DETAIL OF DR. WORTH'S MUSCLE EXERCISES AND OTHER TREATMENT FOR STRABISMUS (CONCOMITANT)*

C. C. WALKER, M. D., Des Moines

I shall limit my paper to the non-operative treatment of strabismus, as this includes the earliest treatment for all cases.

In order to clearly understand Dr. Worth's treatment of squint, and principally concomitant, convergent squint, it will be necessary to know what he considers the basic and essential cause of squint (conv.), which is the absence of, or a poorly developed, "Fusion Faculty." This theory sets aside entirely Dr. Donder's theory of squint,

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the abnormal relation of convergence and accommodation brought about by hypermetropia. Hypermetropic astigmatism in conv. squint and myopia, myopia astigmatism in divergent squint. These according to Worth's idea are only strong contributing factors in the production of squint, and not the cause of it.

With a normally developed "Fusion Faculty," Worth claims that conv. squint seldom develops regardless of the contributing causes, while without a stable "Fusion Faculty" squint is very apt to develop and usually before the sixth year.

In support of this theory, Worth cites many cases of squint in which he was able to begin the training of the fusion faculty early in time of onset and in years. In these cases he brought about a permanent cure of the squint. In contrast to these he also cites many cases which came under his care later in time of onset and in years, when the vision in the squinting eye was practically lost and the "Fusion Faculty" but poorly developed, or not at all. In these cases the results were very unsatisfactory; in many scarcely no improvement was noted.

The title of my paper may be somewhat misleading in the term, "muscle exercises." It is more properly termed "fusion exercises." While the extra ocular muscles are exercised to a certain extent in these treatments, the only reason for using the amblyoscope is to train the "Fusion Faculty" to unite the two retinal impulses, one from each retina, into one, in other words to bring about binocular single vision.

The treatment for strabismus ought to be begun as soon as possible after the deviation makes its appearance. Orthoptic exercises cannot be given successfully to children under three years of age, and as many squints occur before this age, it is necessary to prevent the loss of central fixation and deterioration of vision in the squinting eye by some other non-operative method of treatment. The non-operative treatments for strabismus can conveniently be divided into the following headings:

1. Correction of the error of refraction.
2. Use of the occlusion pad.
3. Atropin in the fixing eye.
4. Stereoscopic treatment for training of the "Fusion Faculty."

(1). Correction of the error of refraction.

In all cases of squint, a careful refraction examination under a reliable cycloplegic should be made first, to determine the total amount of refractive error. The astigmatism should be corrected in full, while the hypermetropia should be reduced from one-quarter to one diopter according to the amount of hypermetropia present. In

moderate degrees of myopia, usually the full amount is corrected, in high myopia a little less than full correction is given.

It is often a difficult question to know at what age glasses ought to be given. In cases of marked hypermetropia, myopia and astigmatism, I believe glasses can not be given too early in life. Dr. Worth has ordered glasses fitted to many children under twelve months of age, and he says has been able to make them stick on. Most oculists however seldom prescribe glasses before the first two years of age.

(2.) The use of occlusion pad and atropin in the fixing eye are different methods by which the squinting and usually the amblyopic eye is forced into use. The occlusion pad should be used, especially when the squinting eye is quite amblyopic with vision 20/200 or less. In fact the occlusion pad is the only thing that will serve the purpose in eyes that have the vision reduced to 20/200. The pad ought to be kept on almost constantly to get the best and quickest results. The occlusion pad prevents absolutely seeing with the covered eye, which atropin will not do, especially where the difference in visual acuity is marked. The pad may be continued, if possible, until the vision in the squinting eye has improved enough so that it will be used in fixation. Improvement is usually noticed in two or three weeks; at the end of two or three months if no improvement is noticed, this treatment should be discontinued.

After the vision in the squinting eye has increased sufficiently to be used in fixation, the pad may be discontinued and a $\frac{1}{2}$ per cent atropin solution dropped into the fixing eye every morning, to paralyze the accommodation. The child will use the atropinized eye for distant vision and the squinting eye for close seeing. In this way amblyopia will be prevented until orthoptic treatments can be used. One must be sure that the accommodation is completely paralyzed and that the squint has been transferred to the good eye.

The use of the atropin is a much better method than the occlusion pad; it requires less attention; does not interfere with the health of the eye, and is an efficient curative measure. It also leaves binocular vision at least possible, if the tendency to establish binocular vision is there.

The use of the cycloplegic may be kept up for months, and in some cases it may be necessary to continue it for a year or more. The cycloplegic should be discontinued at intervals to ascertain if the eyes are used together or not. In some cases it will be necessary to use atropin in the previous squinting eye for a short time, to establish binocular single vision.

(4.) Stereoscopic exercises for the training of "Fusion Faculty."

The instrument originated, made and used by Dr. Worth is called the amblyoscope, which is composed of two halves, joined by a hinge. Each half consists of a short tube joined to a longer tube at an angle of 120 degrees. At the junction of the longer and shorter tubes is an oval mirror, which reflects the image from the object slides. Each half has at its distal end an object slide carrier and at its proximal end a convex lens, having a focal length of five inches, the distance of the reflected images from the object slides. A brass arc connects the two tubes, which is so arranged that the tubes can be brought closer together or separated, as the case demands. Any adjustment up to 60 degrees inward and 30 degrees outward is possible. Dr. Black has added a vertical adjustment which allows the amblyoscope to be adjusted to a hyperphoria.

If an error of refraction is present, glasses should be worn during the exercises, especially should the correction be before the squinting eye be worn.

The treatments ought to be begun as early in life as possible, as soon as the child is old enough to look at pictures and talk about them. The earlier the treatments are given, the more readily will the strabismus yield to the exercises, at the time when the "Fusion Faculty" is normally developing. After the sixth year very little can be accomplished in training a defective "Fusion Faculty."

The child should be placed on the surgeon's knees or on a stool in front of the doctor. The amblyoscope is first adjusted to the angle of the squint. If one eye is amblyopic, the illumination, which consists of two electric or ordinary lamps, is adjusted so that the intensity of light before the good eye is diminished and before the amblyopic eye increased. The object slides are put in place, which at first should consist of familiar pictures, that do not require true fusion but simply simultaneous vision, with each eye, such as a cage and bird, hoop and clown, trap and mouse, etc. At first the child will only see one picture and usually the one before the good eye. The intensity of illumination is again adjusted until the squinting eye sees the other part of the picture. Dr. de Schweinitz has adopted a revolving wheel which contains smoked lenses of different densities, which are placed before the non-amblyopic eye to equalize the acuity of vision.

By moving the instrument about, a position will be found when both pictures will be seen, and the bird can be made to go in and out of the cage at will. These exercises are kept up until the child

has very little trouble in seeing both pictures simultaneously.

Other slides are then shown which require true blending or fusion of the parts to make a complete picture. After a time the intensity of illumination should be equalized before both eyes and the angle of deviation lessened from time to time, until the visual axis are parallel or nearly so. An amplitude of from five to ten degrees may be acquired. The desire for binocular vision will fill in any gap that may remain and in many cases brings about a cure of the squint.

Other slides requiring third grade fusion or the sense of perspective may be tried.

The "Fusion Sense Training" does not hold out any thing very encouraging for cases of divergent and alternating squint.

In the former, the squint does not develop until between the seventh to twelfth years of age, when the "Fusion Sense" has been fully developed. While in the latter there is a total absence of the "Fusion Sense," (or non-development). The treatment in these cases must be other than the orthoptic treatments.

In conclusion—three results may be obtained in "Fusion Sense Training," namely:

1. The squint may be cured entirely during the treatments.
2. The deviation may be improved.
3. There may be no change in the amount of deviation. In these cases operative measures will be necessary to bring about parallelism of the visual axis.

Discussion

Dr. R. H. Parker, Des Moines—My experience with Dr. Worth's method of treatment has been somewhat of a failure. Dr. Worth no doubt is able to obtain his results because he has a better conception of how to train a child perhaps than we have. His theory however, that all of these cases are due to lack of development of the fusion center is somewhat at variance and somewhat of a shock to the members of this section who have always accepted Donder's theory. Be that as it may, however, proper refraction is able to cure 30 per cent. of the cases.

Dr. G. F. Harkness, Davenport—Regarding the use of the amblyoscope I might say that a few years ago I used it so faithfully that I wore the paint off of it, but now when I occasionally turn to it I find that I have to dust it off. I can only recall one case where to my own satisfaction I felt that the amblyoscope did all that Worth claims for it. It is a procedure which is not easy to carry out, first because of the age of the children and secondly because of the time and patience required. I have been told that a large part of Worth's real success comes from the fact that many of his children have had excellently trained English governesses who are able to carry out his exact ideas with great persistence, and

naturally they may get results where we are not able to in the average American family.

Dr. Mary K. Heard, Iowa City—In my clinical and private work where I can get an assistant to persistently stay with a patient, I have had some good results by sessions of one-half hour daily with the Worth-Black amblyoscope. These cases represent under-development of the fusion faculty, but our greatest success comes from full correction of the refractive error combined with exercises. I have found that smaller children will use auto goggles with the fixing eye blinded and will play auto driving, etc., and use them all day, whereas they would not wear perhaps merely a pad over one eye. This is particularly true in very small children.

Dr. Allison, Rodney—In our method of treating these cases, I do not think it is necessary to attempt to use any one line exclusively; correction of the refraction error is of course just as important as spending a great deal of time on these patients with the amblyoscope. Worth who has a nurse to carry out his work intelligently is of course able to accomplish considerable.

Dr. F. G. Murphy, Mason City—It is surprising sometimes how well young children will wear glasses and in fact do almost everything else but take them off. Children of even twelve or eighteen months appreciate the comfort of properly fitted glasses as much as they do later in life.

Dr. C. C. Walker, Des Moines, in closing—To secure the best results we should begin treatment early. To my mind Worth's amblyoscope intelligently and persistently used in conjunction with the correction of the refractive error and the use of the occlusion pad or atropine in the fixing eye, gives better results than any other method without the use of the amblyoscope.

THE USE OF THE DUODENAL TUBE*

JAMES F. CHURCHILL, M. D., Chicago, Illinois

It seems to me that one of the most important advances of the past few years in the treatment and diagnosis of gastrointestinal conditions is the introduction and perfection of the duodenal tube. The credit for this very simple, but very valuable, instrument is due to Max Einhorn of New York.

The duodenal tube as we know it is not at all the instrument originally devised, nor indeed, so far as I know, did Einhorn have any such thing in mind at the outset. He was interested in the study of the duodenal contents in the human, and he found the means at hand for obtaining specimens of the contents very unsatisfactory. This consisted in giving olive oil, which induced in some instances a regurgitation of duodenal contents through the pylorus, whence they were re-

moved by the stomach tube. He devised the scheme of allowing the patient to swallow a small bucket attached to a stout cord. This was small enough to pass the pylorus. After allowing a sufficient time to elapse, the bucket was withdrawn and a few c.c. of contents recovered. The duodenal bucket, as it was called, excited widespread interest and was much used. However, it was an almost useless device, its only worth being that it led to the invention of the duodenal tube. This instrument has proved of immense value not only as a diagnostic aid but also more important still, as a means of treatment. The only strange thing is that it was not thought of years before it was.

A duodenal tube of the original Einhorn type consists of a small soft rubber tube, with marks 40, 60 and 75 c.m. from the lower end. These marks correspond to the cardia, the pylorus, and beyond. When the 75 c.m. mark reaches the teeth the bulb will be well down in the duodenum. On the end of the tube is a perforated metal bulb. This is usually gold plated or of nicked steel. The upper end is closed by a stop cock.

Several modifications of this tube have been made, the best of which is the Rehfuß tube. This is a distinct improvement over the Einhorn model in that the bulb is elongated and instead of being pierced by small holes, it has longitudinal slits, each of which is equal in diameter to the tube. This greatly lessens the likelihood of plugging the openings, which is particularly liable to occur in the aspiration of stomach contents, regarding which I shall speak shortly. Among other models is the Holzknecht tube. This tube is entirely too large and stiff and cannot be used for continuous duodenal feeding.

The tube possesses the great advantage over the stomach tube in that it can be very easily swallowed and without danger.

One hesitates to pass a stomach tube where there is a grave heart lesion, or where there is a suspicion of an aneurysm. In these cases the duodenal tube can be used with perfect safety. There is so little discomfort attached to taking the tube that patients do not object to taking it repeatedly, which cannot always be said of the stomach tube.

I know it is not difficult or disagreeable to take, because I have swallowed the tube myself to find out. The bulb is certainly not so large as particles of food one frequently swallows.

To introduce the tube, I have the patient take the bulb in the mouth and take a drink of water. The swallowing act carries the bulb down to the first mark within two or three minutes. They may continue to take sips of water during its

*Read before the Austin Flint-Cedar Valley Medical Society at New Hampton meeting, July 13th and 14th.

passage if they so desire. There is not often very much gagging or straining. I have found that by reassuring the patient, beforehand, I am usually able to overcome the purely psychic factor which produces the gagging. I show the bulb to the patient, compare it to the size of a bite of bread, and assure him that I have swallowed it myself. This usually suffices.

If the tube is to be used for feeding purposes, I usually have the patient swallow it in the evening and give a half grain codein by mouth, to insure a good night's rest. Some clinicians report that they are occasionally obliged to paint the pharynx with cocaine solution to prevent gagging. I have never been obliged to do this and I have used it on many and various types of persons.

The tube is fastened to the night clothing of the patient after allowing for the distance it is to be swallowed. If it is desired to stop the bulb in the stomach, the tube is shortened so that the second (60 c.m.) mark will not pass beyond the teeth.

If it is desired to have the bulb enter the duodenum, the tube is accordingly given more slack and the patient instructed to lie on his right side for two or three hours. If the tube is given in the evening we practically always find the bulb in the duodenum by morning. If the bulb fails to pass in this time we are usually dealing with a pyloric obstruction, either organic or spasmotic. If the latter is the case, it is as a rule possible to make the tube pass by one of several maneuvers: I first gave soda bicard. dr. I in warm water through the tube and atropine sulph. gr. 1/100—either by mouth or hypo. It has been advocated to give Tr. Belladonna m x through the tube, the supporters of this idea maintaining that the local action is increased. Personally, I have never seen any advantage in this over the use of the alkaloid.

If the above measures fail, I give Tr. Opii m x through the tube and later repeat the bicarb. solu. and the atropine. These measures will usually relieve the spasm and the bulb passes. The patient is of course kept on the right side. In giving the alkaline fluid, it is well to give 8-16 oz. so that there is enough to excite peristalsis.

If the tube is used for gastric analysis, it is swallowed with the last bites of the test meal and retained until time for evacuation of the contents.

The question I hear most often is—"How do you know where the bulb is?" "How can you be sure it is in the duodenum?" This is a very easy point to determine and there are three ways of doing so. The first is to aspirate through the tube. If the bulb rests below the pylorus one recovers a straw colored to golden fluid which is

alkaline to litmus. No free HCL is present. If in the stomach a fluid containing acid will be obtained—providing one is not dealing with an achlorhydria.

The second and surer way is to have the patient drink a glass of diluted milk and immediately aspirate—even while the patient is drinking. If the bulb is in the stomach the milk returns through the tube, if in the duodenum, no milk is recovered. This method cannot be used with patients who are vomiting.

A third method is by direct fluroscopic examination or X-ray picture. I inject the tube with a thin bismuth suspension while the patient is being fluroscoped and the outline of the tube becomes very clear. It is thus easy to see where the bulb is located, and even to measure accurately how far beyond the pylorus it lies. I have done this on a number of my hospital cases, simply out of curiosity, but have never found it really necessary.

Patients do not complain of any discomfort from the tube except an irritation of the throat. This is very mild and usually passes off in twenty-four hours. I have the patient pass the tube behind the last molar. Sleep is not at all disturbed and there is no danger of biting through the tube.

Indications for Use—First let us consider the tube as a diagnostic agent. I have found it much more agreeable to the patient than the stomach tube in removing stomach contents. An additional advantage over the stomach tube is that it drops to the lower point of the stomach by gravity. For the purpose of making fractional gastric analysis, it is indispensable. Let me digress a moment to say that I have come to believe that the single gastric analysis tells us very little in the majority of cases. It is only by following the course of gastric digestion from the beginning to the end that we can hope to learn much about the secretory and motor functions of a given stomach. We can in this way not only know the degree of acid and other secretions every ten or fifteen minutes but we can learn the actual emptying time of the stomach. Since the introduction of fractional analysis, our ideas as to the normal curve of gastric secretion have markedly changed. We now know that a single examination of the stomach contents at the end of forty-five or sixty minutes may give us an actually erroneous idea of the gastric secretion. For example, we may find at the end of one hour a total acid of forty—a normal acidity, we say. However a sample removed at the end of two hours may show an acidity of 120—an abnormal finding which we would have overlooked in the single analysis.

Many cases have been studied, bearing out these statements.

When giving a test meal, I have the patient swallow the tube with the last few bites of the meal. Samples are withdrawn every ten or fifteen minutes and curves of total and full acidity are plotted. Of course, other examinations of the contents (blood, sarcinae, etc) can be made at the same time.

For duodenal analysis the tube is usually given in the evening and the duodenal contents removed in the morning. It may be left in place as long as desired. The principal diagnostic uses here are the determination of blood, bile and pancreatic ferments in such suspected conditions as duodenal ulcer and obstruction to the biliary or pancreatic ducts. This proceeding is especially valuable in making estimations of the relative amounts of bilirubin in the duodenal contents in differentiating hemolytic from other types of anemia.

The *therapeutic uses* of the tube consist of feeding, either into the stomach or duodenum, and the duodenal administration of drugs.

Duodenal feeding is, I feel, one of the greatest advances in the therapy of gastric disorders made in recent years. It does just this much: It puts foods of the proper nutritive value directly into the upper part of the small intestine without subjecting the stomach to the irritation of the passage of food,—it permits us to feed a sufficient amount so that the patient is abundantly nourished, and it absolutely prevents vomiting.

I will first enumerate the more common indications for duodenal feeding and then discuss each separately.

Ulcer—gastric and duodenal.

Pylorospasm.

Continued secretion—hypersecretion.

Hyperemesis gravidarum.

Persistent vomiting, not due to pyloric obstruction.

Stasis from ptosis or gastric atony.

Anorexia.

Ulcer—Gastric and duodenal ulcer may be considered together. It seems to me that it affords the means of carrying out the ideal medical treatment of ulcer—i. e. it puts the stomach absolutely at rest. The ulcer is not irritated by food and because of the lack of food stimulus the gastric secretion is reduced. In addition to the duodenal feeding, we give sufficient alkali by mouth to neutralize the stomach acid. It has been suggested that the tube itself might irritate the ulcer, especially one near the pylorus. I can only answer that I have never seen this occur, and I have fed a number of ulcers in this way. Clinicians with whom I have talked and writers on

the subject make the same statement. Another great advantage is that we are able to avoid the time spent in rectal feedings and low diet by mouth, and can nourish the patients from the beginning—an important point in many cases. Moderate bleeding is no contraindication, in fact it is an additional indication for the use of the tube, since it insures *rest* of the stomach.

We have fed a considerable number of gastric and duodenal ulcers in this manner at Wesley with some very gratifying and no untoward results.

Pylorospasm—Pylorospasm is quickly relieved and the patients can be well nourished if one can succeed in getting sufficient relaxation to permit passage of the tube. The argument is the same as for ulcer.

Continued Hypersecretion—In continued or hypersecretion the duodenal tube sometimes succeeds because it permits us to break the vicious circle of hypersensitiveness of the stomach, food stimulus and acid irritation. The effect on the purely nervous element in some of these cases must not be overlooked.

Hyperemesis gravidarum—Here the results are brilliant. It affords a means of overcoming a condition which all of you have seen become very serious—causing the loss of the fetus or even the death of the mother in some cases. When the usual treatment of small dry feedings by mouth fail, do not try rectal feeding, but make immediate use of duodenal feeding. Rectal feeding is accompanied by a great loss in weight and strength and this can be entirely avoided by the duodenal method. The tube may be left in place for an indefinite time, and the woman carried over the danger period.

Persistent Vomiting—Persistent vomiting not due to pyloric obstruction or to one of above conditions—I refer here chiefly to the class of cases which I speak of as the “vomiting habit”—I think most of them are pure neuroses. They usually occur in women and are often very difficult to cure. Feeding by the duodenal tube accomplishes a cure in many cases by getting them out of their habit, by increasing their nutrition and demonstrating to them that their digestive organs *are* present and working. The psychic effect is sometimes wonderful. It is not uncommon to see patients who have had one or more operations for this symptom with a recurrence a few weeks or days following operation. Such a patient was admitted to the medical service at Wesley Hospital January 28, 1915. She had had five abdominal operations and two on the throat. The last, in September, was a gastroenterostomy with an occlusion of the pylorus. The gastroenterostomy

opening was found patent on fluroscopic examination. This young woman complained of attacks of pain in the epigastrium followed by vomiting. The vomiting recurred several times a day and small amounts of blood were vomited at the close of many of the attacks. A duodenal tube was put down. The bulb readily passed through the opening and she was fed in this way for fourteen days. No vomiting occurred during this time, nor for several weeks after. She vomited several times during an attack of grippe some weeks later, but when last seen the patient was eating well and not vomiting.

In cases of stasis from atony or visceroptosis, we greatly improve the condition by increasing the nutrition and by avoiding the distention of the stomach by decomposing, retained food. It accomplishes far more than gastric lavage, which has been the medical treatment up to the present time.

An extremely important indication for duodenal feeding which I have never seen mentioned is malnutrition due to anorexia. I do not say that the idea is new, but at least it is original so far as I am concerned. The more important cases are those of anorexia which we see so often, accompanying tuberculosis and like conditions. We feel at times that these patients might be saved if we could only get them to eat. They have an absolute aversion to food. For these cases, duodenal feeding is a life saving measure. I have fed two of these cases with the happiest of results. They are given water by mouth, and food *when* they ask for it. A case of this type was a young woman who entered the hospital with an enormous tuberculous pleural effusion in the right pleural cavity—500 c.c. were removed six different times. She ran a temperature ranging from 99.6 to 103. Her weight on admission was not recorded. The only food she could be gotten to take was orange juice, tea, a bit of toast, a few sips of milk and chocolate. Her weight went down steadily until on the fourth week it was seventy-six pounds. Duodenal feedings were here commenced. The weight loss stopped, and at the end of twelve days when the tube was removed she weighed seventy-nine and one-half pounds. On the fifth and sixth day of duodenal feeding she began to complain of hunger. Liquid and semi-solid foods were given by mouth along with the tube feedings. The improvement in her general condition has been very marked and she is now apparently on the road to recovery. I believe that this girl would have died of exhaustion had we not fed her by the duodenal tube.

In mental states the feeding may be either duodenal or gastric. Of course, there is nothing new in this.

Feeding by duodenal tube into the stomach is indicated in the mental states mentioned above and in cardiospasm. It replaces feeding with the large stomach tube, simply because the duodenal tube can be left in situ, avoiding the bother of passing the tube for each feeding.

As to the technique of feeding:

First, the length of time the tube may remain in place, seems to be indefinite. The only rule to follow here is the existence of the indication. The longest I have ever left the tube in situ has been three weeks in an ulcer case. There was no indication to remove the tube at that time so far as the tube was concerned. The patient was perfectly comfortable and the tube gave him no bother at all. In the anorexia case, mentioned above, the tube was removed after twelve days, because the girl was eating well and the duodenal feedings were no longer necessary.

I have made it a rule to feed every two hours from 7 A. M. to 9 P. M., making eight feedings per day.

The first day I give feedings of three ounces each, the second day five ounces, the third seven or eight ounces, the fourth ten to twelve ounces. I usually stop at twelve ounce feedings, although I have seen sixteen ounces fed without discomfort. Discomfort is due either to overdistention by too rapid feeding, or to the giving of too hot or too cold food. I have found that the following feedings meet the indications better than any other I have tried:

For a ten ounce feeding—

| | | |
|--|-----|---------------------------------|
| Milk | oz. | 6 |
| Cream | " | 3 |
| Sugar | " | $\frac{1}{2}$ (1 tablespoonful) |
| 1 egg with alternate feedings (making 4 a day) | | |
| Beef juice 1 oz. with the odd feedings. | | |

This makes a diet having a total calorie value of—

| | |
|-------------|-----------------|
| Milk | 950 |
| Cream | 1,600 |
| Sugar | 500 |
| Eggs—4 | 280 |
| 4 oz. Juice | 250 |
| | 3,580 Calories. |

This is of course a very high diet, but you will note that the food is well distributed as to the three varieties.

The only trouble I have ever had has been due to the cream—causing flatulence, acne, etc. In these cases, I reduce the cream to one and one-half to two ounce per feeding.

The technique of feeding is very simple but very exact. As I mentioned above, it must be

given slowly and at body temperature. A number of complicated two-way syringes with feeding glasses have been devised but they are of no value.

The best method is to adjust a small funnel to the end of the tube and let the fluid enter by gravity. The patient should lie down or recline and the funnel held only a few inches above the mouth. The food is poured from a small pitcher, which may be placed in a vessel of warm water during waits. It should take ten to fifteen minutes to give a ten to twelve ounce feeding. After the feeding is finished, about an ounce of warm water should be poured through the tube and the stop cock closed. Unless this is done the milk will coagulate in the lower end of the tube or be regurgitated into it, necessitating removal for cleansing.

I find that intelligent patients feed themselves fully as well as do the nurses, after a few demonstrations and an explanation.

Therapeutic uses include the administration of drugs which are irritating to the stomach. The best example is the duodenal administration of ipecacuanha in cases of emebic dysentery. As you know, it has been very difficult to give sufficient doses of this drug because of the vomiting produced by it. This problem is solved by the duodenal tube.

Large doses of salicylates may be given in the same way, when the stomach will not tolerate the drug. Other uses will no doubt suggest themselves as the occasions arise.

One strictly duodenal condition is being treated by direct duodenal lavage and medication, namely catarrhal jaundice. The results are said to be excellent. Morgan of Washington reports several cases so treated.

There is but one absolute contraindication to the use of the duodenal tube and that is organic obstruction, œsophageal or pyloric. Otherwise, I have found no contraindications when the above indications exist.

In closing let me say that I do not wish to give the impression that I regard the duodenal tube as a panacea for all ills of the upper digestive tract. Such is not the case at all. I simply regard it as a new and very valuable aid in the diagnosis and treatment of many gastric and duodenal disorders which has not, up to the present time, attracted the attention and been given the trial it deserves. It enables us to do many things we have heretofore wanted to do and have not had the means to accomplish. Duodenal feeding certainly opens up a great, new field in nutritional therapy.

SLIGHT INJURIES IN SYPHILITIC PATIENTS

T. H. GLENN AND W. R. BATES, Fort Dodge

Before the application of the Wassermann test, many of the chronic troubles ensuing from syphilis went undiscovered and the patient passed through life suffering his infirmities. Since the utilization of this test, new light has been thrown upon these troubles, and we now know that many of the afflictions that, passed as inoperable tumors or tuberculous conditions, were not these at all, but were the result of the *treponema pallida* operating in the body. Syphilis is no longer confined to the big cities and later respectability should not be allowed to throw the doctor off his guard. Not infrequently, a young man who has been a devotee of Bacchus and Venus settles down to a happy life and forgets his past until he is brought face to face with the facts. He may even in some cases, have one or two healthy children and these may show no signs of the disease. The past life is hidden so deeply that the patient has almost forgotten it himself, or his desire to do so is so great that he refuses to admit the truth even when asked. It becomes essential for the physician to find out the truth in spite of the patient, and this we are able to do in most cases by aid of the Wassermann and other allied tests.

The multiplicity of the lesions produced by syphilis should always keep this disease before the diagnostician and he must not forget that the sins of the fathers fall heavily upon the children. Congenital syphilis is by no means rare even in the smaller towns, and its increase is in proportion to the increase of syphilis in the adult. It has been our custom to make a Wassermann test in all doubtful cases; for we find that the elimination of syphilis advances one far on the road to a proper diagnosis.

Not long since, a young man was referred to one of us for treatment. He said that a few days before he had been struck on the eye with a small piece of wood. The injury was not very great at the time and he kept on working. It grew worse, however, and he went to his doctor who gave it the ordinary treatment, but in spite of this, it became more severe. When first seen by us, the cornea was very hazy and sight was almost gone. The patient denied any venereal disease, but in light of the fact that the wound refused to heal, a Wassermann test was made and the serum gave a four plus reaction. The patient was put on mercury and iodides and the eye cleared up in a short time so that the patient was able to return to work.

A school boy nine years of age came for treat-

ment. His mother said that he had always been well up to the time that he went in swimming. Soon thereafter, he began to complain that he could not see things clearly. He had to give up school. He was taken to his family doctor and in spite of all treatment, he grew worse. When first seen by us, he had a marked keratitis which had extended to both eyes. The mother denied any venereal trouble in herself or husband. A Wassermann test was made, however, and the serum gave a three plus reaction. The patient responded at once to mercurial inunctions. As soon as the eye was clear, the patient ceased to come to the office for some time. He did not continue treatment with the result that he was forced to see us again for the same trouble. It again responded to syphilitic treatment and the patient is apparently well at the present time. We were unable to get blood from the mother of this patient, but from symptoms noted in her, we are sure that she too has the disease. She gave mercurial rubs to the boy, and while doing so said that she herself felt better. The father of the boy admitted having had the disease sometime before marriage.

Mr. N., a bachelor, fifty years of age, came for treatment. He said that he had always had difficulty in breathing and at times went to other climates for relief. At the present time he has difficulty in swallowing anything.

He thinks the trouble started some few weeks before as a result of drinking some hot soup. He said this burned his throat and made it sore for a few days. The soreness disappeared but since that time, he has noted that he has had some difficulty in taking food. This has gotten progressively worse until at the present time he can not even take fluids easily. He was losing strength fast as a result of not being able to take nourishment. Examination showed a large mass which seemed to be continuous with the esophagus. The tumor was not tender and the patient said he suffered no pain except for the inability to get food down. He denied venereal disease, so much so that one was almost inclined to believe him. The growth had been diagnosed as cancer and we were inclined to this view on account of the appearance of the patient. An X-ray examination revealed a large mass in the region where the tumor was felt. The blood of the patient was taken and examined. The Wassermann test was two plus. The patient was given an injection of salvarsan followed by mercurial rubs, and the tumor seemed to disappear. The patient was able to eat solid food and gained seventeen pounds in weight.

A young man with an apparent negative history was operated on by one of us for deviation of the septum. He seemed to be perfectly healthy and denied any past illness of any kind. A submucous resection was made. The result was apparently perfect. The wound refused to heal in spite of the fact that it looked perfect at the time of operation. This fact led us to make a Wassermann test on his blood which gave a two plus reaction. Patient refused

treatment but we are sure that mercury would have helped him at once.

Mrs. P. came for treatment of a small sore on the side of her nostril. She said that she had been well up to a few weeks ago when her husband playfully pulled her nose. She said it was a little sore at that time but that she paid no attention to it. Since the sore seemed to be getting larger instead of smaller, she wanted something done. In addition to the sore the woman complained of a dyspepsia which she has had for a long time. In light of the fact that such a slight trauma was able to produce such a long standing injury a Wassermann test was made. Her serum gave a three plus reaction and under the proper treatment the patient is showing marked improvement.

These cases illustrate very strikingly a point that is very frequently overlooked by the general practitioner. An injury of such a mild nature that should not produce any effect at all in a normal person may produce serious results in an individual suffering from syphilis either congenital or acquired. In fact such a slight trauma may call into action the latent infection. The lesion produced may be the first visible sign of the presence of the disease.

Whether the spirochetes are in the part and start up a lesion as soon as the tissues are injured, or in the blood and are carried in the circulation to the injured tissue, is a question not easy to decide. In all probability, some lesions may be accounted for in one way and some in an other. That spirochetes may be found in the skin as well as in the blood has been demonstrated by several workers.

In the case of the recurrent attack of keratitis, it is probable that the spirochetes remained in the cornea and after the effects of the mercury had been removed, they set up more trouble. Levaditi and Yamanouchi were able to recover the spirochetes from the cornea of a rabbit 113 days after the experimentally produced keratitis had healed. Neisser claims to have found these organisms in the skin even when no lesion was present. Hoffman has found them in the scar tissue of a healed chancre. Dennies thinks that the spirochetes gain access to epithelial cells, multiply in the spaces between them and migrate in both directions through the disturbances of the basal layer.

Since Levaditi demonstrated the method of producing lesions in the rabbit's testicle by means of injecting into it syphilitic material, the spirochetes have been found in many places where formerly they were thought to be absent. Many workers have found them in the blood, especially during the secondary stage of the disease, while Ulenhuth and Mulzer claim to have demonstrated them in the milk of a syphilitic mother. Whether

in the blood or in the skin one fact is certain that very slight injuries may start the organisms to work.

Many times a patient comes to the office with a mild trauma so mild that one wonders why it should give any trouble at all. A good prognosis is given and the patient leaves the office happy, soon to return with a far more serious lesion. It is now time that a blood test be made and often the cause of the trouble will be explained at once.

Syphilis should always be in the mind of the practitioner for judging from the number of cases seen by us, we are convinced that many of the cases of chronic dyspepsia which refuse to yield to diet or drugs will clear up if given mercurial treatment. Many of the cases in which the clinical signs of tuberculosis are present but the tubercle bacilli absent on repeated examination, are not tuberculous conditions at all but the result of an invasion of the lung by the spirocheta pallida. Skin lesions have many times been treated for epitheliomata without results when a Wassermann test would have suggested iodides and mercury. Diseases of the eye, ear, nose and throat as well as lesions found elsewhere in the body, which do not respond as they should, call for a blood test, and if done properly it will many times clear up the case.

Syphilis is known by the variations and the multitudinous nature of the lesions it produces. It imitates almost all the pathological conditions found in man, and no physician with the interest of his patient at heart should fail to give the full benefit of both laboratory and therapeutic tests. Some will be negative, but the fact that a few of the many may be saved from a life of misery, is sufficient reason to use the Wassermann test in all doubtful cases. When this test is made properly, it is reliable. The number of failures is due to faulty technic and improper attention to the preparation of the serums as well as to the failure of the men who do the work, to make it an individual test.

HAY-FEVER-PRODUCING WEEDS IN THE UNITED STATES

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Some weeks ago, the American Hay-Fever-Prevention Association published through the press its general instructions regarding the prevention of hay-fever. These directions avoided any reference to the general or local causes which form the predisposing factor to hay-fever, but

were directed to the destruction or avoidance of the noxious weeds whose pollen form the exciting cause. They were limited moreover to the fall or most common type of hay-fever, commencing from the first part of July to the end of August and lasting for about six weeks or until frost or maturity arrests the pollinating process.

The chief cause of the fall hay-fever is the pollen of the two varieties of rag-weed. While the instructions aroused a great deal of interest and were utilized even by some of the state boards of health, there was found to be an unexpected ignorance in most sections as to what constituted the "rag-weed." To meet this demand for information, the American Hay-Fever-Prevention Association has prepared illustrations of both varieties of rag-weed, which, with the following descriptions, will enable any one to identify these noxious weeds.



FIGURE 1

WORMWOOD RAG-WEED (*Ambrosia Artemisiifolia*). Responsible, with the GREAT RAG-WEED, for 85 per cent. of Fall Hay-Fever. More common in the Middle and Northern States.

The generic name of the two rag-weeds is *Ambrosia*. As Dr. Gray states, "this is ill-chosen for these worthless and coarse weeds." The common or wormwood variety (Figure 1) is

called "Artemisiifolia" on account of its leaves resembling those of the wormwood (*Artemisia*). It is an annual with leaves much cut and thin, opposite and alternate, as shown in the illustration. It has spikes of green flowers (staminate) at the end of the branches. The pistillate or fertile flowers are at the intersection of the branches with the stalks. It resembles the common wormwood, which however bears small insignificant white flowers.

In the middle and northern states, the wormwood rag-weed is by far the most frequent, being especially prevalent in neglected fields, yards and road-sides. It is usually found in fields where a crop of wheat, rye or oats has been harvested in early summer and afterwards neglected. It grows from one to five feet in height.



FIGURE 2

GREAT RAG-WEED (*Ambrosia Trifida*), whose pollen is one of the chief causes of Hay Fever. Grows in moist lands. Very abundant on the Gulf Coast.

The great rag-weed (Figure 2) is called "Trifida" on account of its large three-lobed leaves. It is the tallest member of the composite group, and frequently grows to a height of twelve feet. It has a stout stem with a frost-like pith. The

insignificant greenish flowers form a terminal pointed cluster, which are staminate (male). The pistillate flowers, like the wormwood variety, are located near the stalk. It is common in moist soil and, in the low lands near the Gulf Coast, forms about 90 per cent. of all the rag-weeds. In the drier interior sections of the country, the reverse is the case.

The irritating principle of both rag-weeds is formed in the spike-like flower, being yellowish in color, and almost as light as smoke. It is so abundant that during the stage of pollination it will stain one's clothes yellow while passing through such a field. It is so extremely light that it is almost impossible to collect any amount of it without its being blown away.

Instead of the pollen of the rag-weed being used directly for fertilization through the agency of insects, as is the case with most plants, nature has created an immense amount of pollen so that it can be carried by the wind to the distant pistillate flowers. The pollen is so abundant that if the rag-weed is struck during the active stage, the pollen will come off so freely that it is called "smoking" by many farmers.

The seed is about one twentieth of an inch in diameter and is formed in the pistillate flowers. They are solid and are not easily carried with the wind. Were the seed wind-blown like those of the thistles, eradication would be much more difficult.

Laboratory investigators have isolated a large number of plants whose pollen will produce the characteristic reaction of hay-fever; but, from the standpoint of the practical sanitarian, we must give our special attention to those pollens that are naturally found in the atmosphere in sufficient abundance to produce the symptoms of hay-fever. The golden rod, for instance, has been accused of being responsible for 50 per cent of all cases of hay-fever. The committee on original research of the American Hay-Fever-Prevention Association has demonstrated the fact, however, that the golden rod belongs to a group of only 15 per cent. of cases that do not owe their origin to the rag-weed.

An obvious reason for the golden rod not being responsible for a large number of cases is that its pollen is not wind-blown, but heavy and tenacious, so that the majority of patients are affected only in the event that the nostrils are placed in close proximity to the flower. The pollen of the rag-weed, however, is easily detached in clouds and is distributed by the wind over a large territory. Besides, the usual attacks of fall hay-fever sufferers are co-incident with the pollination of the rag-weed, while the golden

rod frequently blooms for weeks after the attacks have subsided.

The most active stage of the rag-weed is in the month of September and every effort should be made at this time to destroy these noxious weeds. This will not only be a source of relief to hay-fever sufferers sensitive to these pollens, but will prevent the formation of the seed, which will produce the weeds in great abundance the following year.

The object of the American Hay-Fever-Prevention Association is the dissemination of general knowledge of benefit to sufferers from hay-fever, the education of the public regarding the weeds that are known to produce this disease, and the use of its influence and co-operation towards the eradication of such weeds. By means of lectures and articles in the scientific and public press, it is endeavoring to educate the public in the relation of certain weeds to hay-fever, and the best methods for their avoidance and eradication.

One aim of the Association is to see that this important matter is treated with the respect and consideration which it merits. A malady, with which hundreds of thousands are afflicted, which has among its complications many catarrhal diseases, asthma, bronchitis, infections of the cavities of the head and ear diseases, and which is so depressing in its effects on the nervous system that even many cases of suicide are attributed to this cause, justly demands the most careful and dignified consideration.

Mal'arial fever, in recent years, has been enormously diminished by preventive methods, such as draining swamps; typhoid fever has been decreased through the care taken in the water supply, and the destruction of infected material; tuberculosis and other diseases have found their advocates for preventive methods. The American Hay-Fever-Prevention Association has instituted, directly and through its affiliated state associations, a campaign of education regarding the hay-fever producing weeds, which it is hoped will in a few years destroy the cause of this widespread disease.

HOSPITAL NOT LIABLE FOR DEATH FROM SMALLPOX

(Jones vs. Sisters of Charity of the Incarnate Word [Tex.], 173 S. W. R. 639)

The Court of Civil Appeals of Texas affirms a judgment in favor of the defendants, whom the plaintiff had sued for damages for the death of his wife, who died from smallpox after she had been

placed in the defendant's hospital to have an operation performed on her. The court says that, among the facts established by the undisputed evidence, it appeared that a physician had advised that it was necessary to have the operation, whereupon Mrs. Jones' son asked the physician to make arrangements to take his mother to the defendants' hospital. This the physician did, and notified the son, who then took his mother to the hospital, where they were met by one of the Sisters, and Mrs. Jones was given a room in a new building which had recently been added to the hospital, with which it was connected. At that time there was a smallpox patient on the opposite side of the hospital, and on a different floor from that on which Mrs. Jones was placed. The Sister who received Mrs. Jones did not inform her or her son that there was a case of smallpox in the hospital, and they were both ignorant of that fact; but the physician, who acted for Mrs. Jones and her son in making the arrangement with the hospital authorities, knew when he made the arrangements of the existence of the case of smallpox in the hospital. Other cases of smallpox thereafter developed, and, on the fourteenth day after Mrs. Jones was operated on, and when she was fully convalescent from the operation, she was stricken with smallpox, and died from that disease in a few days. However, there had never been a case of smallpox in the room, or in the portion of the hospital in which Mrs. Jones was placed, and no case except hers developed in that portion of the building. The court agrees with the trial judge that the facts of the case were not sufficient to require the submission to the jury of the question of the defendants' liability for damages for the death of Mrs. Jones. There was no evidence of any intentional concealment on the part of the hospital authorities of the existence of the case of smallpox. Mrs. Jones' physician, who knew of the existence of the smallpox therein when he made the arrangements for her to enter the hospital, evidently thought it perfectly safe for her to go there, or he would have advised her to go elsewhere to be operated on. The health officer of the city, who gave directions as to the quarantine of the first patient, did not prohibit the reception of other patients in the hospital. The court cannot see how the Sisters could be held negligent for doing that which the most eminent medical authorities, with a full knowledge of the situation, regarded as safe. The plaintiff's wife in some unaccountable way may have contracted the disease from cases which occurred in the hospital, but the hospital authorities could not, in the circumstances, have reasonably anticipated that she would contract the disease, and could not therefore be held to have been guilty of negligence in failing to inform her when she applied for admission that there was a case of smallpox in the hospital. The trial court instructed the jury to find a verdict for the defendants, and rendered judgment in accordance therewith, which judgment should be affirmed.—*Jour. A. M. A.*

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TREATMENT OF WOUND INFECTION.

The treatment of wound infection is still a subject of much discussion in Europe, and various measures have been put to the test. The academic discussion of the use of various antiseptics has given place to a most rigid practical examination of the claims of various agents and means under circumstances of the most varied character. The lives and the future of so many thousands of men are so involved that every degree of certainty is demanded to secure the best results. Fortunately for humanity, the leading medical scientists of the world have been and are now contributing to the solution of the problems of antiseptic surgery. We have at various times called attention to the views of Sir Almroth Wright and Sir Watson Cheyne on wound treatment. We have now an important contribution from Dr. Alexis Carrel, published in the *Bulletin de l'Acad. de Med.*, giving the results of experiments and observations made by M. M. Dakin, Daufresne, Dehelly, Dumas, and himself, at the Rockefeller Laboratory and Temporary Hospital at Compiègne. The most distressing fact stated by Prof. Tuffier that of 1,000 amputations at Maison-Blanche, "in about 800 the operation was made, not on account of the gravity of the wound, but owing to complicating infection." It has been clearly shown that the antiseptic methods relied on at the beginning of the war were wholly ineffectual, but this fact was not realized until the most unfortunate experience demonstrated a re-investigation of the whole subject was necessary—at least in so far as military surgery was concerned—Carrel shows that all wounds due to shells, mines, grenades are infected; that bac-

teriological examination made as early as six hours after the wound has been received, has in all cases revealed the presence of a varied microbial flora aerobic and anaerobic, in small numbers at first and localized about the projectile of scraps of clothing. After twenty-four hours the appearance was very different; the microorganisms were so numerous they could not be counted and were found in every part of the wound. Carrel insists that it is easy to clear a wound of the microbes during the first few hours, but later it is practically impossible. Realizing the difficulties that lie in the way of accomplishing this, considering the circumstances under which the patient is placed, if he could find some unirritating and effective antiseptic solution which would penetrate into every corner of the wound and be constantly renewed, complete sterilizing of the wound could be effected. This he thinks Dr. Dakin's search has discovered, in a special solution of sodium hypochlorite. Dr. Carrel insists further that the essential point is to get the wounded to an ambulance or clearing station as quickly as possible. For him, the future of the patient depends upon the rapidity of his transport to some place where his wound can be treated by an effective antiseptic method, so that it may be put on the way to become in a few days an aseptic wound. At the ambulance or clearing station foreign bodies, including scraps of clothing, should be removed at once, usually with a finger of the gloved hand or with dissecting forceps. The object of any operation then done should be to open up the wound sufficiently to allow it to be thoroughly cleaned; it should not be mopped, brushed or curetted, and particular attention should be given to the arrest of hemorrhage. Having opened up the wound and arrested hemorrhage and having ascertained the situation and extent of every recess, the next step is to employ an efficient antiseptic. Carrel recommends that devised by Dakin, on the grounds that it is effective if properly used, cheap, and easily made by any ambulance dispenser.

Dr. Dakin's directions for the preparation of a 0.5 to 0.6 per cent. solution of hypochlorite are as follows (*British Medical Journal*, August 28th, p. 319): "One hundred and forty grams of dry sodium carbonate (Na_2CO_3), or 400 grams of the crystallized salt (washing soda), is dissolved in ten litres of tap water, and 200 grams of chloride of lime (chlorinated lime) of good quality is added. The mixture is well shaken, and, after half an hour, the clear liquid is siphoned off from the precipitate of calcium carbonate and filtered through a plug of cotton; forty grams of boric acid are added to the clear filtrate, and the resulting solution is ready for use. A slight

additional precipitate of calcium salts may slowly occur, but it is of no significance. The solution should not be kept longer than one week. The boric acid must not be added to the mixture before filtering, but afterwards."

SOMETHING ABOUT THE ENDAMEBAE BUCCALIS

Some time since we had the pleasure of reviewing Dr. C. C. Bass' work on Pyorrhea in which he presented many facts in relation to the infection that caused the disease. In the October number of the Indiana State Medical Journal appears an address on the The Relation of Endamebae to Pyorrhea before the Indiana State Medical Society. The subject has been so little discussed in medical literature in relation to the newer views that we offer some of the things Dr. Bass said. We are informed that the endamebae is the original cause and that its function is to pave the way for bacteria to reach the root of the tooth. The endamebae is not a bacterium but an animal parasite having ameboid movement, and by a slow process works its way down the tooth to the apex of the root and carries with it a greater or less number of pyogenic bacteria. These bacteria set up an inflammation that loosens the tooth. We are informed that the average time required to destroy the tooth is ten years; that nearly every adult mouth contains endamebae and probably every mouth contains bacteria capable of developing a suppurative inflammation if the conditions are favorable. About fifty per cent of children are infected by the time they are twelve or fifteen years of age, and the disease soon begins.

We are lead to believe that pyorrhea would not occur without endamebae, notwithstanding the multitudes of bacteria in the mouth. There seems to be no doubt that the parasite is conveyed from the mouths of older and infected persons to the mouths of the young by the home drinking cup, by kissing and by many other means. In the way of hastening the disease, the tooth brush is probably the most active means. As the brush is ordinarily used, more or less trauma is inflicted—the same may be said of the toothpick, which is probably the most pernicious of the two—and a starting point for the infection process. If the endamebae starts out on its own account, as it probably may, the trauma hastens or promotes the suppurative process and brings about the death of the tooth sooner. Pathologists are beginning to find evidences of secondary joint and endocardial infections from primary foci at the roots of the teeth.

The only specific agent for the destruction of

the endamebae, so far discovered, is emetin. In his book on pyorrhea, Dr. Bass recommends one drop of fluid extract of ipecac to the wet tooth brush and brush the teeth with it after gently brushing to clean them. More recently Dr. Bass has employed the following:

Rx

Emetin Hydrochloride 5 gr.

Distilled Water 1 oz.

Mix one or two drops in one-fourth glass water. Use as a mouth wash once every day.

THE DES MOINES MEETING OF THE WEST- ERN SURGICAL ASSOCIATION

The twenty-fifth annual session of the Western Surgical Association was held in Des Moines December 17th and 18th and was the largest and probably the most productive meeting in the history of the Association. The student of medicine who has attended the various meetings of the Association from its beginning, may trace the history of medical progress during that period. The Association may fairly be claimed to be a correct index of surgical work in all the more advanced states of the world. Twenty-five years is but a short period as measured by years, but when measured by results, it seems to span more than a lifetime.

The first active session of the Society was held in Des Moines, December, 1893, under the presidency of Milo B. Ward. At this meeting Dr. Schooler was elected president to preside at the first Omaha meeting in 1894, and it is fair to say that this Association has contributed its full share towards the advancement of surgery, and has enumerated among its membership many of the foremost men in the profession.

The 1915 meeting just closed was in every respect a success. Nearly one hundred members were present. Much of the success of the meeting in itself was due to the activities of the committee of arrangements. The proprietor of the Chamberlain Hotel was early enlisted in the program, and was able to get the auditorium of the hotel in readiness for the meeting, and was able to provide accommodations for all the members that came.

The annual Association banquet was most efficiently served, and after many inquiries we were unable to discover any one who had any criticisms to make. We desire to say in this connection that the Chamberlain Hotel Company has put in operation a most excellent auditorium with a seating capacity of nearly 500, and of most perfect acoustic properties. This will enable medical associations in the future to hold

all their important sessions without going out of doors.

Among the noticeable things in relation to the scientific program, was the eloquent and scholarly address of the president, Dr. Joseph Rilus Eastman of Indianapolis, and the special address of Dr. Joseph C. Bloodgood of Johns Hopkins University. Dr. Bloodgood had two messages to bring to the Society. One was in relation to "first aid" to the injured in industrial and military service, and the cancer problem which is so agitating the world at the present day.

In inviting the Association to meet in Des Moines, it was agreed that the entertainment should be by the members of the Association scattered over the state. Dr. Fay has certainly placed himself in line of promotion as chairman for future medical conventions because of his skill in co-ordinating the activities of the fifteen members of the Association in the State of Iowa.

The presidential honors went to Dr. L. W. Littig of Davenport. The nomination of president is made by a committee composed mostly of ex-presidents. There is no politics in the election of president of the Western Surgical Association, and the office goes with merit. The profession of Iowa may well congratulate Dr. Littig on receiving this high honor.

ENDOWMENT OF \$500,000 TO AMERICAN COLLEGE OF SURGEONS

John G. Bowman

The American College of Surgeons begins the new year with an announcement that it has secured from its fellows an endowment fund of \$500,000. This fund is to be held in perpetuity, the income only to be used to advance the purposes of the college. By this means lasting progress toward the purposes of the college is assured.

The college, which is not a teaching institution but rather a society or a college in the original sense, now lists about 3400 fellows in Canada and in the United States. Without precedent for swiftness of development it stands today a powerful factor both in the art and in the economics of surgery.

Primarily the college is concerned with the training of surgeons. But the significant fact in connection with the endowment just secured is that it has come from the surgeons themselves, inspired by a motive for better service to the patient. Ideals in the profession of medicine are living things. Probably no more convincing proof of this fact exists than the sacrifice which the surgeons of this continent have made willingly in order to raise this fund.

To begin with, these ideals are to find concrete expression along the following lines of activity,—

1. Since the whole problem of the training of specialists for the practice of surgery is the primary purpose of the college, the regents propose at an early date to present a clear conception of the college to the undergraduate medical students of this continent. The regents, further, will ask each senior student of this group who has in mind to specialize in general surgery or any branch of surgery to register with the college. As these students, then, serve later as internes and as surgical assistants, they will be requested to report these facts to the college. The college, in turn, will systematically seek information as to the ability and character of such men; and the information thus obtained becomes the basis of admission to fellowship in the college. In addition to this procedure, the regents will insist upon the proper keeping of case histories, and they will endeavor to stimulate in these men in training right ideals of medical practice. In this program they ask the active co-operation of the faculties of the medical schools and of all practitioners of medicine.

2. Inasmuch as proper training in surgery is inseparably involved with the conduct and efficiency of hospitals, the college will seek accurate data on all matters which relate to hospitals. From time to time it will publish studies upon hospital problems, the purpose being always to be helpful to the hospitals. These publications, further, will inform recent medical graduates as to where they may seek adequate general or special training in surgery. To be concrete the college will deal with such problems as (a) the proper equipment for medical diagnosis, e. g., well equipped laboratories for chemical, pathological, and X-ray work; (b) the proper forms for case histories and the facilities for keeping these records; (c) the management and the curricula of the nurses training schools; (d) the specialization essential in any well organized hospital.

3. The college will ask the faculties of medical schools to consider the advisability of conferring a supplementary degree of proficiency in general surgery and in the various specialties of surgery.

4. The college will issue readable monographs, educational in nature, to the press, to the general public, to hospital trustees, and to the profession of medicine upon subjects of medical procedure and the whole meaning of fitness to practice surgery.

The entire impetus of the college springs from within its own membership. Necessarily that impetus implies reform. But there is a vast differ-

ence between reform preached at men and reform innate in the hearts of men which finds expression at their own initiative. Whatever impetus the college possesses, it originates among the surgeons themselves. It is not an extraneous force or an "uplift" movement. But rather, out of the widely divergent views on many subjects among the fellows, the aims of the college rise as those time-tried aspirations which are inherently the basis of all that is valuable in the vocation of surgery. The purposes of the college are concerned directly with matters of character and of training, with the betterment of hospitals and of the teaching facilities of medical schools, with the laws which relate to medical practice and privilege, and with an unselfish protection of the public from incompetent service; in a word, they embody those ideals which have stood the test of centuries. Upon these the fellows are united. These are the ideals which each fellow, single handed, has endeavored to foster, and the expression of them today through the college comes as a sort of mass-consciousness of the whole body of fellows. The splendid fact is that the fellows have grasped in an instant the meaning of the college by a process of fusion and they have gladly made sacrifices for its success.

As one comes into wide acquaintance with the fellows of the college and catches some fair notion of their earnestness, he sees the future of the organization not by means of logic. There is something more subtle and potent than argument. A determined optimism carries a momentum of its own. Without a logical process it seeks concrete expression; and, more than this, it really recreates circumstances through all shifts of weather or play of incident with a certainty not excelled by an utterly rational course. The fellows of the college, in their widely scattered districts, fuse their consciousness of the organization with a splendid hope in their hearts to advance all that is important and valuable in the profession. This very attitude of mind is the first promise for the future of the college. It is a promise that admits of no defeat. It is a pledge of loyalty to medical patriotism which means loyalty to the public welfare exercised through intellectual sincerity and scientific accuracy. It means a safeguard to the public, for it indicates where honest and adequate surgery may be found.

RENAL CANCER ASSOCIATED WITH STONE IN THE KIDNEY

In Johns Hopkins Hospital Bulletin for April, 1915, Dr. J. R. Coryell of the Mayo Clinic presents an elaborate report of a case of renal can-

cer associated with stone. This is interesting in view of the fact that cases of this kind are rare. In the Mayo Clinic in ten years, 140 kidneys containing stones were removed, nine of which also contained cancer. In the case presented, numerous sections were made to show the relations between the seat of irritation and the proliferation of epithelium and of the underlying connective tissue. According to views generally held of early cancer development, the proliferation of fibroblasts beneath the epithelium upsets the balance between the epithelium and the connective tissues. The epithelial growth, assuming the normal gland formation with loss of function, according to the theory presented by Ewing several years ago in an elaborate paper, in the Archives of Internal Medicine, marks the beginning of the atypical structure of cancer. Dr. Coryell, by numerous sections, follows the course of cancer development from the irritation proliferation of fibroblasts, illustrating the same by a series of microphotographs, fifteen figures in all, altogether a beautiful exposition of the irritation cause of cancer.

HIGH CALORY DIET IN TYPHOID FEVER

Dr. Warren Coleman and Dr. Eugene F. Du Bois, of New York, from the Department of Applied Pharmacology of Cornell University Medical College and the Second Medical Division of Bellevue Hospital, have made some investigations as to the influence of diet on the respiratory changes in typhoid fever. These experiments were published in the Archives of Internal Medicine for August, 1914, and they are worthy of consideration by those who are engaged in the treatment of this disease.

It may be said that as soon as typhoid patients are admitted to the hospital they are given food in amounts which are increased as rapidly as their digestions will permit. By the end of a week patients are usually taking a litre of milk, from 300 to 400 cc. of 20 per cent. cream, from 100 to 200 gm. of lactose, two or three eggs, a couple of slices of toast and from 10 to 30 gm. of butter. This furnishes between two and three thousand calories. One or two thousand more calories are gradually added in the form of larger amounts of the foregoing or in the form of rice, oatmeal, mashed potato, cream of wheat, apple sauce, custard or ice cream. It was found that patients could be brought into nitrogen and weight equilibrium even in the active stages of the disease when the temperature was still high. The absorption of the large amounts of food given in this diet was investigated, and it was found that protein and carbohydrates were absorbed as well as in health. The nitrogen of the feces averaged 1.12 gm. a day, which was 7.1 per cent. of the average

nitrogen of the food. Carbohydrates were completely absorbed unless more than 300 gm. a day was given, in which case two or three gm. appeared in the stools. Fats were absorbed in huge amounts, and the loss amounted to only 7.2 per cent. during the first three weeks of the fever and 4.5 per cent. in the later stages of the disease. On an average the patients lost in the feces only 5 per cent. of the calories ingested.

STOMACH LAVAGE IN CARBOLIC ACID POISONING

Dr. David Macht from the Department of Medicine and Pharmacy, Johns Hopkins, presents a series of experiments on the value of certain agents for stomach lavage when poisonous quantities of carbolic acid are swallowed accidentally or intentionally. Dr. Macht reaches the following conclusions from his experiments.

1. The efficiency of lavage in phenol poisoning depends on the quantity of poison taken, on the time after poisoning that the lavage is begun, and on the solution used for washing the stomach.

2. A strong solution of sodium sulphate appears to be the most useful for the purpose; next in efficiency comes plain water.

3. The influence of alcohol in phenol poisoning depends on the time of its administration. An animal that is previously intoxicated with alcohol can withstand better the effects of phenol taken afterwards. On the other hand, alcohol administered to an animal after poisoning with phenol will aggravate the symptoms and hasten death.

4. The use of alcohol in carbolic acid poisoning should therefore be strongly discouraged.—(Johns Hopkins Bulletin, April, 1915.)

CONTROLLING CANCER IN ENGLAND

According to the New Mexico Medical Journal, Portsmouth was the first municipality in England to encourage a public educational campaign for the control of cancer. It appears that in 1913 there were 230 deaths in Portsmouth from cancer as compared to 198 deaths for the year 1914. This decrease in the number of deaths in face of an increased population, has given the Portsmouth sanitary authorities great satisfaction.

Dr. Frazier, Medical Health Officer, gives the average death rate from cancer in Portsmouth as 6.79 per 10,000 population, 20 years ago; but in 1913 had risen to 9.16 per 10,000. In that year the total number of deaths was only thirty-four less than was caused by tuberculosis. Admitting that improved methods of diagnosis may have increased the number somewhat, nevertheless it is quite apparent that the death rate from cancer has been increasing until the year 1914 when there was a material reduction.

The method of education adopted included monthly publications in the local newspapers of articles relating to cancer. Arrangements were made

for periodical lectures to nurses and midwives to encourage persons suffering from growths of any kind, to consult a physician with the view to an early operation. The plan of education does not materially differ from plans which have been adopted in various sections of this country.

MEMBERSHIP ROSTER OF STATE MEDICAL SOCIETIES

Percentage of members to total number of physicians in the state as per 1915 report of A. M. A.

| Percentage | Percentage |
|--------------------------|----------------------------|
| Hawaii ..... .75 | New York ..... .52 |
| Wisconsin ..... .73 | Ohio ..... .50 |
| Virginia ..... .70 | Kentucky ..... .50 |
| New Hampshire.... .70 | West Virginia ..... .50 |
| Alabama ..... .69 | Wyoming ..... .50 |
| Minnesota ..... .66 | Indiana ..... .49 |
| Illinois ..... .63 | Missouri ..... .49 |
| North Carolina .... .61 | Oklahoma ..... .49 |
| Massachusetts ..... .60 | Montana ..... .48 |
| Michigan ..... .60 | Mississippi ..... .48 |
| Vermont ..... .57 | Utah ..... .48 |
| Arizona ..... .57 | California ..... .47 |
| Connecticut ..... .57 | Kansas ..... .47 |
| Texas ..... .56 | South Dakota ..... .47 |
| Nebraska ..... .56 | Porto Rico ..... .47 |
| Canal Zone ..... .55 | Oregon ..... .45 |
| Iowa ..... .55 | Florida ..... .45 |
| South Carolina ..... .55 | Arkansas ..... .44 |
| North Dakota ..... .54 | Delaware ..... .41 |
| Georgia ..... .54 | Louisiana ..... .40 |
| Rhode Island ..... .54 | Dist. of Columbia... .39 |
| Washington ..... .54 | Colorado ..... .38 |
| Pennsylvania ..... .53 | New Mexico ..... .34 |
| New Jersey ..... .53 | Tennessee ..... .34 |
| Maine ..... .52 | Nevada ..... .32 |
| Maryland ..... .52 | Idaho ..... .31 |
| | Philippine Islands ... .13 |

DAMAGE SUITS FOR ALLEGED MALPRACTICE BASED ON ALLEGED NEGLIGENCE IN OBSTETRICAL CASES

Damage suits for alleged malpractice based on alleged neglect in obstetrical cases are increasing throughout the country. The attorney for the California State Medical Association urges the members of the Society to exercise unusual care in each case of confinement in the examination of the placenta. See that it is examined in the presence of some other person and that a record is made in your notes of the fact that this was done, including the name of the nurse or other person who witnessed the examination. The attorney, who has had much experience with these cases, says:

"We have had from time to time the same point urged as a basis for suit, and while there is no doubt at all that every physician does make such examination thoroughly as a matter of course, nevertheless to have it appear clearly from the testimony of a

nurse or some other person that such examination was made would perhaps keep patients from basing suits on such ground."—(Ohio Medical Journal, Sept., 1915.)

EXPELLED FOR FEE SPLITTING

Three years ago the Missouri State Medical Society adopted a by-law against fee splitting. According to the Journal of the Missouri State Medical Association, the first trial for violation of this by-law, was held recently, the offending member was found guilty by the Board of Censors, the report of the censors was adopted by the Society, and the sentence was carried out. It is not often that convicting evidence can be secured against a member of a medical society for fee splitting, although it is well known that certain members pursue this practice. It is unfortunate that so few members of the profession have the courage to give evidence against doctors who are engaged in this practice, and there are so many who are interested directly or indirectly, that evidence sufficient to convict a member of fee splitting, is extremely difficult to get, but an isolated conviction here and there will have sufficient influence, no doubt, to make the offending members more and more guarded in their conduct, and will strengthen the resolution of those who would like to free themselves of this disreputable business.

DR. EVELYN FRISBIE ELECTED PRESIDENT OF THE NEW MEXICO MEDICAL SOCIETY

Dr. Evelyn Frisbie of Albuquerque, formerly of Des Moines, was elected President of the New Mexico Medical Society, held at East Las Vegas, September 6-8, 1915.

THE AMERICAN COLLEGE OF SURGEONS

At the annual convocation, held in Boston, Friday evening, October 29th, about 450 additional surgeons were admitted and honorary fellowships were awarded to Dr. D. W. Cheever, professor emeritus of surgery at Harvard University; Dr. Wilfred T. Grenfell, of Labrador; Dr. Stephen Smith, of the New York State Board of Health, and Dr. Lewis McL. Tiffany, of Baltimore. The officers were all re-elected, as follows: Dr. J. M. T. Finney, of Baltimore, president; Dr. W. W. Chipman, of Montreal, first vice-president; Dr. Rudolph Matas, of New Orleans, second vice-president; Dr. Albert J. Ochsner, of Chicago, treasurer; Dr. Franklin H. Martin, of Chicago, secretary; Dr. John G. Bowman, of Chicago, director. About \$100,000 was added to the endowment fund of the college, which now amounts to nearly half a million dollars. It is the purpose of the organization to establish a great medical library and museum, and to raise the stand-

ard of surgical training in the medical schools of this country.

CLINICAL CONGRESS OF SURGEONS ELECT OFFICERS

Dr. Fred B. Lund, of Boston, was elected president of the congress at the sixth annual meeting held in Boston. Other officers were elected as follows: Dr. Jasper Halpenny, of Winnipeg, Canada, first vice-president; Dr. S. M. D. Clark, of New Orleans, second vice-president; Dr. Franklin H. Martin, of Chicago, re-elected secretary; Dr. A. B. Kanavel, of Chicago, re-elected treasurer, and Mr. A. D. Ballou re-elected general manager. Next year's congress will be held in Philadelphia.

DEATHS IN OHIO FROM ALL CAUSES FOR THE YEAR 1914

The vital statistics report of Ohio for the year 1914 gives the total number of deaths from all causes, 65,078. Of this number, 6,564 died of tuberculosis. The total number of cases of death from cancer and other malignant disease, 4,194. The greatest number of deaths from any one cause were from organic disease of the heart. This includes 7,891. Next stands tuberculosis, which as already stated, includes 6,564. Third, cerebral hemorrhage, 4,690, and 4th, cancer, 4,194.

EXAMINATION OF EMPLOYEES OF NEW YORK RESTAURANTS AND HOTELS

Every employe in New York's 4,500 restaurants and hotels, assisting in preparation and serving of food, has been notified by the board of health that they must secure forthwith certificates stating that they are free from infectious diseases and that in the future they must submit to annual examination. More than 100,000 persons are affected by the order, it is said.—(The Medical Fortnightly, October, 1915.)

NEW MUSEUM JAR

The Journal of the American Medical Association of October 9th, gives a description of a new museum jar for the preservation of eye-specimens, devised by Dr. Henry Albert of Iowa City. The special feature of the new jar consists of two covers—the inner one of white opal glass to serve as a background for the specimen, and an outer one of clear transparent glass, beneath which a label is placed.

The advantages of the new jar over those at present on the market, are:

1. Permanency of the preparation.
2. Neatness and permanency of the label.

BOOK REVIEWS

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Volume IV, Number V, (October, 1915). Octavo of 228 Pages, 56 Illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Published Bi-Monthly. Price Per Year, Paper, \$8.00. Cloth, \$12.00.

This number contains twenty-six cases of which twelve relate to bones and joints, presenting an unusual variety of interesting and suggestive studies. A particularly interesting case of cicatricial compression of the ulnar nerve from a gun-shot wound of the arm, is presented, occurring eight weeks before coming to the Clinic. The proper treatment of these cases is so important both to the patient and to the surgeon that this Clinic is well worth careful study.

Another case for study is one of empyema of the pleural cavity of long standing which was treated by Dr. Murphy who employed the Estlander rib-resection.

A third case we would draw particular attention to is a case of ureteral calculus in relation to which Dr. Murphy made some interesting remarks touching the important points in diagnosis.

Dr. W. B. Coley, of New York, contributes a case of inoperable recurrent carcinoma of the nasopharynx and surrounding structures cured by auto-sensitized autogenous vaccines. Suggestions are offered to explain perhaps the reason why so many fail to secure Dr. Coley's results, not only in a case of this kind but also in cases of metastatic arthritis.

Dr. Murphy says, "We believe the autosenitized vaccine is a decided advance in the vaccine treatment of disease," and cites Dr. Rosenow.

The interest and value of these Clinics does not abate and we feel that the numerous repetitions of similar bone and joint cases will lead to a marked improvement in our fracture work.

DISEASES OF THE NOSE AND THROAT

By Algernon Coolidge, M. D., Professor of Laryngology in the Harvard Medical School. 12mo. of 360 Pages, Illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$1.50, Net.

The first thing that appealed to the reviewer was the large print and wide space between the lines.

The second chapter, "Clinical History," is very clear and concise. It takes up under subheads the clinical history, nasal obstruction and secretion, hoarseness, cough, obstruction to breathing, pain, and under each one describes their causation. The anatomy and physiology of the various regions are briefly, but clearly described. The important subject, "Fractures of the Nasal Bones," which is so often slighted in the larger text-books, is here taken up in detail, six pages of text being given to it.

Chapter five deals with the diseases of the septum, and ends with an excellent article on epistaxis. In the article on "Diseases of the Nasal Cavities" we

have a very up-to-date discussion of "colds," which is most important in a book of this kind. The author does not make himself clear in his diagnosis of hypertrophic rhinitis, and under title of atrophic rhinitis he describes "ozena," but does not differentiate between these two important yet different diseases. The paragraphs on vaso motor rhinitis, hay fever, asthma, and nasal neurosis are very good. The diseases of the accessory sinuses are concisely treated upon. The chapter on "The Tonsillar Ring" is deserving of credit, and the various diseases of the larynx, which are exceedingly hard for students to master, are described very clearly.

In the last chapter on therapeutics, cocaine is discussed at length, while its substitutes, such as novocaine, are only mentioned. The arguments in this well written book for and against the more common operations, should appeal to, and can be recommended to, all students and practitioners.

WHAT TO EAT AND WHY

By G. Carroll Smith, M. D., of Boston, Mass. Second Edition Thoroughly Revised. Octavo of 377 Pages. W. B. Saunders, Philadelphia and London, 1915. Price, Cloth, \$2.50, Net.

The purpose of this book, as indicated in the Preface, is to furnish practical information as to what may be considered a normal diet under ordinary conditions, and what variations may be made in disease to the best advantage to the patient.

In the somewhat lengthy introduction, the author calls attention to many important facts.

First, touching prophylaxis or the preparation of food, kinds of food as relates to digestion, absorption, assimilation and elimination, the questions of exercise, relaxation, sleep, etc.; problems of food supply; classification as protein element, vegetable and animal, carbohydrates and fats as caloric furnishers, and the utilization of various food elements.

Second, the selection of a diet. Under this head the food substances are measured up with the view of their food value. Tables are given for ready reference. Consideration is given to water and its use, harmful effect of continued large quantity of water, the salts of the body, excretion of salts, sources of in the body.

Third, condiments, their advantages in stimulating appetite and the secretions of digestive juices, etc. Considerable attention is given to the much disputed advantages of alcohol in a normal diet. The author declares that alcoholic liquors are not necessary to nutrition, but sees some advantage in them after thirty years of age in certain persons; before thirty their use can be only harmful. The author enumerates the advantages that may come from the use of alcohol in moderate quantities after fifty.

Fourth, sleep and rest as aids to digestion, climate, sunshine and open air, agreeable occupation and environment, etc.

The introduction furnishes the basis for a scientific and logical use of foods in various deviations from health and in disease. It is held that a careful

study of individual cases should be made so that the practitioner may escape empiricism as far as possible. Suggestions and formula are given in the management of obesity and emaciation. The chapter on diabetes is interesting and very suggestive. We should distinguish glycemia due to faulty carbohydrate metabolism, and true diabetes mellitus, and should work out first a test diet, which will be of great diagnostic value and fix the point of tolerance for carbohydrates. Full dietary tables are presented for the management of diabetic conditions. We are so greatly dependent on a proper diet in the treatment of diabetes that we welcome a direct, scientific and practical discussion of the subject, notwithstanding that every work on diabetes points out the main facts.

Gout and rheumatism come in for a like consideration. Heart diseases are so little amenable to drug treatment and are so much influenced by diet and the conditions of the intestinal tract, that the physician is more influenced in prolonging the life and usefulness of his patient by studying questions of diet, digestion and elimination, than anything else, and will find many helpful suggestions in this volume. There are so many other diseases, particularly typhoid fever and nephritis, where correct principles of diet are essential to a successful treatment, that we feel called to urge upon the practitioner of internal medicine the importance of studying "What We Should Eat and Why."

DISEASES OF THE SKIN AND THE ERUPTIVE FEVERS

Third Edition, Thoroughly Revised

By Jay Frank Schamberg, M. D., Professor of Dermatology and Infectious Eruptive Diseases in the Philadelphia Polyclinic and College for Graduates in Medicine. Third Edition, Revised. Octavo of 585 Pages, 248 Illustrations. Philadelphia and London. W. B. Saunders Company, 1915. Cloth, \$3.00, Net.

The author divides his subject into the following sub-heads: Anemias, Hyperemias, Inflammations, Hemorrhages, Hypertrophies, Atrophies, New Growths, and Neuroses. The acute eruptive fevers are fully considered. The text is full, the descriptions are clear and the suggested lines of treatment are logical. The illustrations are all that could be desired. Both the publishers and the author deserve commendation for the appearance of this volume.

THE CARE OF THE BABY

The New (6th) Edition

By J. P. Crozer Griffith, M. D., Professor of Diseases of Children in the University of Pennsylvania. Sixth Edition Thoroughly Revised. 12mo. of 463 Pages, Illustrated. Philadelphia and London. W. B. Saunders Company, 1915. Cloth, \$1.50, Net.

This book, designed—not for the doctor—but for the mother, shows great discrimination in handling

the delicate problems of how much can be told in such a work, and of how to tell this in such a way that the mothers can get out of it all that they should.

The fact that this is the sixth edition, tells how well these requisite factors have been handled. The illustrations are by no means the least important and interesting feature, and must certainly aid the mother in her important duties.

The author who can safely steer a middle course between a confusing technicality and an interesting discourse which teaches nothing, is to be respected, and certainly Dr. Griffith has sustained his reputation in this respect.

The first chapter deals with the hygiene of pregnancy; the second, with the healthy baby, followed by others on bathing, dressing and feeding the child, physical and mental exercise, qualifications of nurses, and finally, on the ailments of babies, for the aid of mothers unable to always secure a doctor's services at once. No better work certainly can be found to place in the hands of prospective mothers.

PROGRESSIVE MEDICINE

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences, Edited by Hobart Amory Hare, M. D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia. Assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College. Lea and Febiger, Philadelphia and New York. Subscription Price \$6.00 Per Annum.

Part four, volume eighteen, furnishes a digest of five different general subjects. Dr. Edward H. Goodman of the University of Pennsylvania, takes up Diseases of the Digestive Tract and Allied Organs, the Liver, Pancreas and Peritoneum.

A particularly valuable digest of the literature on the stomach is given. After presenting the physiology and chemistry of stomach digestion, we are brought to the subject of treatment, especially of ulcer, which forms so large a part of stomach therapeutics. On page 27, a full account is given of Sippy's treatment of gastric ulcer, of which we hear much at the present time. The prognosis of gastric ulcer is particularly guarded. "The clinical course of any gastric ulcer (says Dr. Smithies) is highly individual;" further on it is stated "We have yet no means of determining clinically, in a given case, whether or not such an ulcer will heal in its acute stage, will tend to benign chronicity, or will become the base of a future cancer," and much more to the same effect. We have placed in close relation the optimistic views of Dr. Sippy who limits surgery of the stomach to certain complications (perforation, perigastric abscess and secondary cancer) and the more conservative views of Smithies, based on larger operating room observations. Dr. Good-

man has in this digest placed before the reader data which may be studied with great profit. Under the head of vagotonia and abdominal disease, much interesting information is presented. Valuable information may be found in a careful study of the review of the literature on duodenal ulcer and on constipation.

Diseases of the Kidneys by J. Harold Austin, M. D., of the University of Pennsylvania. The most interesting feature is the review of the elimination tests, including the phthalein test and the relation of elevation of blood-pressure to renal disease and to the man. Considerable space is devoted to a consideration of nephritis from the viewpoint of the most recent investigations.

The digest of the literature of Genito-Urinary diseases is by Dr. Charles W. Bonney of Jefferson Medical College.

Dr. Joseph C. Bloodgood of Johns Hopkins reviewed general surgery, including surgery of the extremities, shock, anesthesia, infections, fractures and dislocations and tumors.

Some interesting statements are made in relation to anesthesia, for instance, Dr. Bloodgood says: "Gas and oxygen in the beginning were given greater attention and employed more generally, because its administration is somewhat spectacular; it required an expert to give it, and patients, having read about it, wanted it. But these factors are now somewhat dimmed by time, and this general anesthetic must stand on its own merit." It is contended that local anesthesia combined with general anesthesia does not lessen shock.

Dr. Bloodgood gives an outline of the First Aid Conference.

The exhaustive review of wounds given by Dr. Bloodgood should be read by every surgeon having to do with this class of surgery, including military surgeons and surgeons for corporations. This section includes 100 pages from the pen of a master.

The article on Practical Therapeutic Referendum is written by Dr. H. R. M. Landis of the University of Pennsylvania.

Among other things is a discussion on serums, a subject that is of very great interest to the profession.

INTERNATIONAL CLINICS, A QUARTERLY OF ILLUSTRATED CLINICAL LECTURES AND ESPECIALLY PREPARED ORIGINAL ARTICLES ON THE VARIOUS DEPARTMENTS OF MEDICINE AND SURGERY AND THE VARIOUS SPECIALTIES

Edited by Henry W. Cattell, A. M., M. D., With the Collaboration of Charles H. Mayo, M. D., Rochester; Sir Wm. Oster Burt, M. D., F. R. S.; Frank Billings, Chicago; and Other Distinguished Authors. 300 Pages. J. B. Lippincott, Philadelphia and London. Price, \$2.00, Volume Three. Twenty-fifth Series.

This is one of the best known of the serial publications offered to the profession, and has for many

years enjoyed an enviable position in the estimation of general practitioners.

The first article is the Diagnosis and Treatment of Gonorrhea, by Lewis W. Bremerman, A. M., M. D., Chicago, with twenty-six illustrations. This paper gives a full and practical account of the complications and sequels and treatment of this very frequently badly treated disease.

Dr. Morris Grossman presents a paper on Dr. Maloney's re-education method in ataxia which he says improves many patients. Complete failure is exceptional and relapses are common. There are several other interesting practical papers; among them is a discussion of acute nephritis in the young by Dr. Floyd Riley of Chicago.

About one-half the volume is taken by a series of papers on Borderland Medicine which are of considerable interest, especially from the standpoint of medical economics. The book contains four articles on surgery, notably one by Dr. John B. Roberts on fractures of the lower end of the radius.

A MANUAL OF THE PRACTICE OF MEDICINE

The New (10th) Edition Revised

By A. A. Stevens, A. M., M. D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania, Lecturer on Medicine in the University of Pennsylvania. Tenth Edition, Revised. 12mo. of 629 Pages, Illustrated. Philadelphia and London. W. B. Saunders Company, 1915. Flexible Leather, \$2.50, Net.

From the time of its initial appearance in 1892, Steven's Manual has been a criterion for works designed to aid the medical student. This latest, but probably not the last edition, of this work, has been revised and kept up to date, presenting the changes due to advances in medical knowledge, with the addition of those topics which such advance has rendered necessary, and, as the author states, without changing the plan of the book. Although designed for the medical student, no physician but will derive a benefit from the reading of the manual, as many will doubtless testify.

The letter-press conforms to the recognized standard of the publishers, as to legibility and appearance.

STUDENTS' TEXT-BOOK OF HYGIENE

By W. James Wilson, M. D., D. Sc., D. Ph., Lecturer in Hygiene and Public Health, Queen's University, Belfast. Published by the Redman Company of Herald Square Building, New York City.

This book is based on a series of lectures given by the author and is primarily intended for the student. The text is divided into twenty chapters. The arrangement is good, the style is pleasing and easy to read. A very practical book, useful not only to the student but also to teachers, health officers and inspectors.

GENERAL MEDICINE

Edited by Frank Billings, M. D., and J. H. Salisbury, M. D., Volume VI of the 1915 Series of Practical Medicine Series. Price, \$1.50.

OBSTETRICS

By Drs. J. B. DeLee and H. M. Stowe. Volume VII of the 1915 Series of Practical Medicine Series. Price, \$1.35.

These two volumes by the Year Book Publishers and ably edited by the above named physicians bring up to date the literature on the given subjects for the past year. They are very useful for ready reference.

PRACTICAL MEDICINE SERIES

Volume IV—Gynecology

Edited by Emilius C. Dudley and Herbert M. Stowe. Year Book Publishers, Chicago.

This volume, being the condensation of the year's best literature on the subject, shows a better arrangement of sub-topics than previously, dealing first with General Principles, then Disorders of Menstruation, Displacements and Injuries, Infections, Malformations and Tumors, and lastly, Sterility. This method of presentation makes ready reference easier, and justifies the reputation of these publishers for putting forth a work of great value to the general practitioner who wishes to keep in touch with the advances in gynecology, yet has not the time or chance to read all the journals on this subject.

THE PRACTITIONER'S VISITING LIST FOR 1916

Four Styles: Weekly, Monthly, Perpetual, Sixty-Patient. Pocket Size; Substantially Bound in Leather With Flap, Pocket, Etc., \$1.25, Net. Lea & Febiger, Publishers, Philadelphia and New York.

This list embodies the results of studious effort to develop and perfect a practical help to the busy physician. The book is prepared to meet the needs of the busy man. Its various tables, charts, outlines, etc., etc., give an added value.

During June the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies: Antiseptic Supply Co.: Special Caustic Applications 50 per cent.

Fairchild Bros. and Foster: Enzymol.

Eli Lilly and Co.: Syrup Cephæline, Lilly.

COMING MEETINGS

The annual meeting of the Association of American Medical Colleges will be held at the Auditorium Hotel, Chicago, February 8th.

The twelfth annual conference on Medical Education, Public Health and Legislation will be held at the Congress Hotel, Chicago, Monday and Tuesday,

February 7 and 8, 1916, under the auspices of the Council on Medical Education and the Council on Health and Public Instruction of the American Medical Association.

SOCIETY PROCEEDINGS

The Appanoose County Medical Society held their annual meeting at Drake Free Public Library, December 24th. The program was:

Expert Testimony—Hon. F. S. Payne, Centerville.

The Iowa State Medical Society, Malpractice, Suits and the Doctor—W. A. Harris, Centerville.

Rules and Regulations of Iowa State Board of Health—Their Relation to the Practitioner—C. A. Mackey, Centerville.

Life Insurance Examinations—L. H. Ruttenberg, Centerville.

The New Hospital—C. S. James, Centerville.

At the annual meeting of the Audubon County Medical Society held at Exira in December, the following officers were elected: President, Ratford F. Childs, Audubon; Vice-President, Robt. A. Jacobson, Exira; Secretary-Treasurer, George A. May, Audubon.

The Buchanan County Medical Society met in annual session at Independence, December 16th. The program included a paper on the Etiology, Diagnosis and Treatment of Syphilis of the Central Nervous System by W. P. Crumbacker, of the state hospital at Independence; a paper on Intestinal Obstructions, by J. H. McCready, Independence; also a paper on the Treatment of Puerperal Sepsis by N. W. Johnson of Quasqueton. The annual election of officers resulted as follows: President, N. W. Johnson, Quasqueton; Vice-President, H. A. Householder, Winthrop; Secretary-Treasurer, F. F. Agnew, Independence. Following the social hour the members and guests enjoyed a dinner at the Owls Club Cafe.

At the annual meeting of the Cerro Gordo County Medical Society held at Mason City, December 21st, the following officers were elected: President, C. L. Marston, Mason City; Vice-President, W. E. Long, Mason City; Secretary-Treasurer, W. J. Egloff, Mason City. Hereafter regular meetings of the society will be held every month.

The annual meeting of the Clinton County Medical Society was held December 20th at the LaFayette Hotel, Clinton.

Dr. E. P. Weih gave a very interesting paper on Advisability of Operations for Meningitis. The newly elected officers are: President, B. C. Knudsen, Clinton; Vice-President, Ralph F. Luse, Camanche; Secretary-Treasurer, H. J. Heusinkveld, Jr., Clinton; Delegate, J. C. Langan, Clinton. At this meeting a movement was started for the founding of a medical library.

The Davis County Medical Society met in annual session at Bloomfield, December 6th. Dr. M. Y.

Sellers, of Moulton, read a paper on the Influence of Rectal Diseases on the General Health bringing out some of the points that are usually overlooked by the average practitioner. Dr. E. T. Edgerly, of Ottumwa, gave an address on Blood Pressure and its Influence on Diagnosis and Reliability for Prognosis. The subject of the paper read by Dr. E. E. Parish of Memphis, Mo., was Pituitrin in Obstetrics.

The discussion on Pituitrin was general and many useful points were brought out.

The officers elected for 1916 are: President, H. C. Finch, Pulaski; Vice-President, Paul Guernsey, Bloomfield; Secretary-Treasurer, Henry C. Young; Delegate, Henry C. Young.

The annual meeting of the Des Moines County Medical Society held at Burlington, December 8th, was one of the most successful and interesting meetings ever held by that society.

There was a large representation of the society members present and many guests from Ft. Madison, Keokuk, Wapello and elsewhere.

The scientific session held at Hotel Burlington was of unusual interest as is evidenced by the program:

Minor Surgical Gynecology—C. E. Ruth, Des Moines.

New Conception of Nephritis—L. W. Littig, Davenport.

Diagnosis and treatment of certain functional diseases of the stomach with discussion of the technique and value of the factional test meal—Chas. E. Elliott, Chicago.

Stereopticon review of genito-urinary methods of treatment—Bransford Lewis, St. Louis.

The semi-annual meeting of the Hardin County Medical Society was held at the Diamond Theater, Eldora, December 14th. The society was especially favored in the program which consisted of papers by Dr. E. L. McEwen, of the Cook County Hospital, Chicago, and Dr. McConnell of the Clinical Laboratory, Waterloo.

At the business session, Doctors King and Bennett of Eldora and Harlow of Union were made members of the society.

The officers re-elected are: President, C. M. Wray, Iowa Falls; Vice-President, E. C. Kauffman, Union; Secretary, W. E. Marsh, Eldora; Treasurer, J. W. Thornton, Ackley.

The society voted instead of holding a summer session to meet with the Austin Flint-Cedar Valley Society, at Iowa Falls.

The Greene County Medical Society held their December meeting at Jefferson. Papers were read as follows: Ulcers of the Cornea, C. W. Blake; Leucorrhea, G. W. Franklin; Report of Cases of Hypertrophied Tonsils as Causative Factors in Appendicitis, B. C. Hamilton, Jr. An interesting discussion of the papers closed the program.

The Harrison County Medical Society convened at the Masonic Temple, Logan, December 8th.

Papers were read by Dr. Hansen, of Logan, and Dr. A. H. Konigsmacher, of Missouri Valley. Dr. Hansen's paper was in relation to the epidemic form of laryngitis that has been quite severe in Harrison county for some weeks.

Serum Treatment in Gonorrhea was the subject considered in Dr. A. H. Konigsmacher's paper. The points emphasized in this paper were: Serum used in small doses is practically inert. Serum should be given in much larger doses until a blood count shows the leukocytes markedly increased. Local treatment should also be rigidly kept up. Thirty cases have been treated this way with very satisfying results and no acute case received treatment over thirty days.

The officers elected for the coming year are: President, Harry N. Anderson, of Woodbine; Vice-President, Hans Hansen, of Logan; Secretary-Treasurer, A. H. Konigsmacher, of Missouri Valley; Delegate, C. S. Kennedy, Logan.

The Jasper County Medical Society met in the parlors of the Grand Hotel, Colfax, Tuesday, evening, December 14th. The following was the program:

Duty of the Physician to the Normal Child—Florence B. Sherbon.

Treatment of Wounds in the Absence of Hospital Facilities—F. E. Boyd.

Pellagra—H. F. Keables.

Tubal Pregnancy—C. R. VanVoorhis.

The following officers were elected for the ensuing year: President, F. E. Boyd, Colfax; Vice-President, J. C. Hill, Newton; Secretary-Treasurer, H. P. Engle, Newton; Censor, R. G. Anspach, Colfax; Delegate, H. P. Engle, Newton; Alternate Delegate, J. L. Taylor, Monroe.

After the scientific program, a banquet was served through the courtesy of the proprietors of Grand Hotel, and an enjoyable as well as a profitable evening was spent.

At the annual meeting of the Jefferson County Medical Society held December 20th at Fairfield the following officers were elected: President, A. S. Hague, Fairfield; Vice-President, C. C. Tallman, Fairfield; Secretary-Treasurer, F. S. Bonnell, Fairfield; Delegate, S. K. Davis, Libertyville.

The Lee County Medical Society met in annual session at the Knights of Columbus Club, Fort Madison, December 29th. The scientific program as furnished by physicians from Burlington, members of the Des Moines County Medical Society, was: Corneal Ulcers—C. P. Frantz.

Brief Review of Twilight Sleep—A. H. Vorwerk.

Concerning the Value of Certain Cardiac Remedies—Geo. B. Crow.

Preventive Medicine—A. C. Moerke.

Trifacial Neuralgia—C. H. Magee.

Following the program the guests and members enjoyed dinner together at the Metropolitan Hotel.

Officers chosen for the ensuing year are: Presi-

dent, J. M. Casey, Fort Madison; Vice-President, F. M. Fuller, Keokuk; Secretary-Treasurer, V. T. Doering, Fort Madison, re-elected; Delegate, C. R. Armentrout, Keokuk.

The annual meeting of the Mills County Medical Society was held at Glenwood, December 2nd. No special program was given, the time being used to discuss certain important ethical questions which were brought up for consideration on account of conditions existing in Southwestern Iowa that had compromised the profession in an undesirable way. After much discussion, the following preamble and resolutions were passed:

That whereas, it has come to the notice of the members of the society that certain consultants and specialists in medicine and surgery have co-operated professionally with members of certain sectarian professions, namely osteopaths and chiropractors which professional cooperation is not in harmony with the ethics of the American Medical Association.

Be it therefore resolved, that we, as members of the Mills County Medical Society, regard such practice as unprofessional and believe that it should be discontinued. We find especially that cases referred to them for treatment by such sectarians are allowed to remain in such sectarian control to the extent of consultations during the time they are in the consultant's or specialist's care, and later are referred back to said sectarian for any necessary after treatment, thus extending to these sectarian practitioners the same courtesies which are enjoyed by the regular profession, thereby compromising the influence of the regular medical practitioner.

Be it Resolved, further, that a copy of these resolutions be sent to each county medical society in the state and to the Douglas County (Nebraska) Medical Society, for the purpose of enlisting mutual co-operation.

Officers re-elected for the coming year are: President, I. U. Parsons, Malvern; Vice-President, Edgar Christy, Hastings; Secretary-Treasurer, W. A. Rush, Malvern. W. A. R.

The meeting of the Muscatine County Medical Society, held at Hotel Muscatine, December 14th was a very interesting one. The scientific program relating to hand infections consisted of papers read by faculty members of the state university.

The subject of H. J. Prentiss' paper was the Anatomy of the Hand; Diagnosis of the Localization of Pus in Hand Infections was presented by H. L. Beye, and the Treatment of Hand Infections was given by C. J. Rowan.

Preceding the program a banquet was enjoyed at Hotel Muscatine.

The annual meeting of the O'Brien County Medical Society, was held December 9th at Sheldon. Dr. Milo Avery, of Primghar, read a paper on Endocarditis and Dr. Elwyn Dudley, of Paullina, read a paper on Pericarditis. The officers for the ensuing year are: President, H. J. Brackney, Sheldon; Vice-

President, George C. Oldag, Paullina; Secretary-Treasurer, Wm. H. Meyers, Sheldon.

The Page County Medical Society met at Shenandoah, Thursday, December 16th, W. C. Phillips, the President, of Clarinda, presiding. The session was largely taken up with business matters. Officers were elected as follows: B. S. Barnes, Shenandoah, President; R. J. Matthews, Clarinda, Vice-President; M. O. Brush, Shenandoah, Secretary-Treasurer; W. C. Phillips, Clarinda, Delegate; T. E. Powers, Clarinda, Alternate Delegate. B. S. Barnes read a paper on Renal Calculi.

The following resolution on the death of Dr. A. W. Parker, of Shenandoah, was adopted by the society.

"The late A. W. Parker, M. D., a member of the Page County Medical Society, practiced medicine for thirty-five years in the immediate vicinity of his boyhood home. Dr. Parker was a man of high ideals, faithful in his family obligations, honest in his dealings with all men, honorable with the medical profession, capable and successful as a physician. He could truly say on his death bed 'I have not knowingly wronged anyone, and, as far as in my power, have done my best for my patients.'"

The Page County Medical Society desires to place on record the many virtues of our late colleague. His honorable and useful life was for the benefit of mankind and enabled him to meet death without regret, bravely and even with cheerfulness.

The annual meeting of the Palo Alto County Medical Society was held at Emmetsburg, December 16th.

P. J. Hession, of Graettinger, was elected president and F. X. Cretzmeyer, of Emmetsburg, was elected secretary-treasurer.

The Polk County Medical Society held its annual meeting and banquet at the Savery Hotel, Des Moines, December 28th, electing the following officers for 1916: President, J. C. Rockafellow; Vice-President, Charles A. Smith; Secretary, Thomas F. Duhigg; Treasurer, E. B. Mountain; Delegate, Lewis Schooler.

The non-medical program given during the course of the banquet was of a high order of excellence consisting of vocal numbers by Grace Jones Jackson and Zell Green and selections by Henry's orchestra.

The scientific program was of unusual interest. Thos. B. Hartzel, D. M. D., M. D., Minneapolis, gave a paper on Secondary Infections of Dental Origin and Their Treatment. Dr. Hartzell handled his subject in a very able and scientific manner and brought out many very original and scientific suggestions.

After Dr. Hartzell's paper, F. Hecker, D. D. S., M. D., Kansas City, discussed briefly the various mouth infections. This was a great treat and many expressed the desire to hear Dr. Hecker at greater length.

The Pottawattamie County Medical Society held its annual meeting December 6th and elected offi-

cers for 1916 as follows: President, Asa O. Wyland, Underwood; Vice-President, C. A. Hill, Council Bluffs, Secretary-Treasurer, Grant Augustine, Minden.

The Poweshiek County Medical Society met in annual session at Grinnell, December 7th. A large representation of the members was present to enjoy the interesting program furnished by Drs. C. J. Rowan and H. L. Beye, of Iowa City, and O. F. Parish, of Grinnell.

The newly elected officers are: President, E. E. Harris; Vice-President, E. F. Talbot; Secretary-Treasurer, C. E. Harris.

The Winneshiek County Medical Society held its annual meeting at Decorah, December 3rd, with a large representation present including members and guests.

The program in harmony with the double aim of the medical society—the improvement of its members and through them the health and well-being of the community—was varied in subject and personality. Dr. Guthrie, of the Decorah Hospital, talked on the Conservation of the Lives of Mothers with particular reference to prevention of cancer. Mayor Baker, of Decorah, discussed the new sewer system of Decorah, his talk being supplemented by Dr. Thomas, city health officer; Ben Bear, president of the board of trustees of Decorah Hospital, gave a report covering thirteen month's work of the hospital; Dr. A. F. Barfoot, of Decorah, spoke on the Treatment of Tuberculosis, considering especially climatic benefits; Dr. Conover demonstrated convincingly the value of dentistry to the physician in treating certain diseases; Mrs. E. M. Fleming spoke on medical and dental inspection of school children and the importance attached thereto; Dr. J. D. Hexom, gave a resume of recent developments in the study of germ diseases.

The officers for the ensuing year are: President, Harriette B. Amy, Decorah; Vice-President, A. F. Barfoot, Decorah; Secretary-Treasurer, J. J. Daly, Decorah; Delegate, H. H. Thomas, Decorah, all re-elected.

The Wright County Medical Society held their annual meeting at Clarion in December. Papers were read by Doctors Best, Sams and Bernard, of Clarion, and Kellogg, of Dows.

The following officers were elected for 1916: President, William Potter, Galt; Vice-President, T. J. O'Toole, Eagle Grove; Secretary-Treasurer, G. H. Steele, Dows.

At the meeting of the Webster County Medical Society, December 7th, Dr. J. D. Lowry, read a paper on Health Regulations and Needed Legislation.

Officers elected for 1916 are: President, A. L. Belt, Ft. Dodge; Vice-President, J. W. Kime, Ft. Dodge; Secretary-Treasurer, G. B. Palmer, Ft. Dodge; Delegate, J. W. Kime.

MARRIAGES

Dr. George C. Oldag, to Miss Ida McComb, both of Paullina, December 9, 1915.

Dr. Lafe H. Fritz, of Dubuque, to Miss Jeannette McIlory, of Pittsburg, Penn., December 29th.

DEATHS

Dr. C. W. Cornell, of Knoxville, Councilor of the Seventh District, died very suddenly January 12th. A more extended notice will appear in our next issue.

W. A. Priest, M. D., Miama Medical College, 1872; a practitioner at Emerson for over twenty-two years; died at his home in Emerson, December 25, aged, **seventy-one**.

William Corns, M. D., College of Physicians and Surgery, Keokuk, 1863; a practitioner for nearly fifty years at Tama, died at his home in Tama, December 21st from hemorrhage of the stomach, aged, **eighty-one**.

Isaac B. Whitaker, M. D., a practitioner for over thirty years at Ottumwa, died at his home in Ottumwa December 14th, aged, **seventy-eight**.

Leora Johnson, M. D., State University of Iowa College of Homeopathic Medicine, 1890; for several years clinical anaesthetist at the homeopathic hospital at Iowa City, died at her home in Iowa City, December 28th, from dropsy, aged **fifty-nine**.

Ira Dean Payne, M. D., State University, Iowa College of Medicine, 1880; Bellevue Hospital Medical College, 1886; formerly a practicing physician for many years at Linden, Dallas county, died at his home in Des Moines, December 9th, from heart disease, aged, **sixty-three**.

Samuel Milton Littlefield, M. D., Rush Medical College, 1884; member of Iowa State and Jackson County Medical Societies, a practicing physician for several years at Andrew, died at the Iowa Sanatorium in Maquoketa, from Bright's disease, November 30, aged, **fifty-five**.

Freeman Harding Hornibrook, M. D., University of Illinois College of Medicine, 1902; member of Iowa State and Cherokee County Medical Societies; consulting surgeon at Cherokee for the Illinois Central Railway; son of Dr. Edward Hornibrook, dean of the medical profession of northwestern Iowa, was found dead in his bed, November 30th, aged **thirty-six**.

Calvin Starr, M. D., Western College Homeopathic Medicine, 1851; a practicing physician at Iowa City from 1857 to 1877 when he removed to Nebraska City, and later to Beatrice, Nebraska, died at his home in Beatrice, Nebraska, November 25th, aged, **ninety-three**.

John W. Davis, M. D., Georgetown University School of Medicine, 1860; who during the civil war enlisted as assistant surgeon of the Sixth Indiana Infantry in 1861; later as surgeon of Twenty-fourth Indiana Infantry, serving until 1863, later entered the Army of Potomac, serving as surgeon of the

Fifth Wisconsin Infantry, until near the close of the war when he located at Lansing, Iowa where he practiced his profession for many years; died at his home in Lansing, early in December, 1915, aged, seventy-eight.

Henry F. Dunlavy, M. D., Missouri Medical College, 1871; Fellow of the American Medical Association; member of Iowa State and Taylor County Medical Societies; who during the Civil War served in the Second Iowa Infantry first as a drummer boy and later as a member of the hospital corps; a practitioner since 1876 at Bedford, died at his home after a lingering illness, December 3rd, aged, seventy.

Judson D. Burns, M. D., Eclectic Medical College, Cincinnati, 1870; a practicing physician at Grundy Center for thirty-nine years, died at his home in Grundy Center, December 27th, from pneumonia, aged, sixty-seven.

Thomas F. Kelleher, M. D., State University of Iowa College of Medicine, 1878; Fellow of the American Medical Association; member of the Iowa State and Polk County Medical Societies; for a number of years medical director of the American Life Insurance Company; assistant examiner for the Chicago Rock Island and Pacific Railway; president of the board of trustees of Mercy Hospital, Des Moines; one of the leading practitioners of Des Moines since 1885; died at his home from complications arising from arterio-sclerosis January 3rd, aged, sixty.

WESTERN SURGICAL ASSOCIATION

Twenty-fifth Annual Meeting, Held at Des Moines, Iowa, December 17 and 18, 1915

The President, Dr. Joseph Rilus Eastman, Indianapolis, Indiana, in the chair.

Ascending Renal Infection

Dr. Daniel N. Eisendrath and Dr. Jacob V. Kahn, Chicago:

We have just completed a series of twenty-seven experiments on dogs and rabbits which demonstrate that infection travels from the bladder to the kidneys and perinephritic tissue by way of the lymphatics in the wall of the ureter and not along its mucosa. Our observations, so far as we can ascertain, are the first to show that the lymphatic capillaries of the periureteral sheath, both in laboratory animals, as well as in the human being, play a most important part in ascending infection. Proceeding a step further, the constant finding of evidences of infection in the immediate vicinity of the rich network of blood vessels, to which Sampson has called attention, surrounding the ureter, makes it seem plausible that infection can travel to the kidney from the female genitalia and other abdominal viscera which lie in close relation to the ureter.

We have attempted to imitate the environment as found in the human being by injecting an emulsion made by mixing the scrapings of agar slant cultures of the organisms commonly found in urinary in-

fections with sterile salt solution, and then injecting it into the bladder of animals. After thorough cleansing of the genitalia, preferably in mere animals, a No. 4 or 5 French ureteral catheter, such as is employed for X-ray work, and can be boiled, was inserted into the bladder, some of the urine taken for cultures, and then an emulsion of bacteria injected into the bladder. All injury to the bladder and ureters was thus avoided and the conditions under which the organisms migrated upward resembled those found clinically as closely as it was possible to do in the animal experiments. Paraffin sections were taken from a number of places in the bladder and kidney and were studied serially. In order to trace the infection upwards, along the ureter, every portion of the latter was cut longitudinally as well as serially, so that no areas would be omitted. In five rabbits and eight dogs the bacillus coli was injected into the bladder. In three rabbits and four dogs the staphylococcus aureus, and in three rabbits and three dogs the proteus vulgaris was used. In one rabbit an emulsion made by mixed acute gonorrheal pus with salt solution was injected.

Summarizing our results, we find that the inflammatory infiltrations follow in a most accurate manner the course of the lymphatics, as determined by the work of Kumita and Bauereisen.

In the early stages of infection the infiltration is found in the submucous layer of the bladder, and is especially dense around the smaller vessels in this layer.

Our work shows that the connecting link between the lymphatics of the ureter and those within the kidney is along the lymphatics of the subareolar tissue which surrounds the blood vessels as they enter the kidney tissue. They follow the organ itself, the course of the intertubular, periglomerular and perivascular lymphatics. In six of our experiments we obtained pure cultures of the same organism from the renal pelvis which we had injected into the bladder. In none of the animals was a positive culture obtained from the heart's blood, so that hematogenous infection can be excluded.

How to Localize Accurately Foreign Bodies in the Chest and the Method of Their Removal

Dr. Emil G. Beck, Chicago:

In my paper I report seven cases in which I removed foreign bodies from the chest cavity, first localizing them by means of stereoscopic roentgenograms, with the assistance of wire localizers. These little localizers are placed on the skin within the suspected vicinity of the foreign body, and the stereoscope will almost invariably localize to a certainty the foreign body and help to estimate its depth within the chest cavity. The seven cases reported are the following: 1. Rubber catheter in lung abscess, with bismuth injection. 2. Bullet in chest. 3. Glass-headed pin within the lung four years. 4. Two buckshots within the chest ten years. 5. Pin tack within the lung, with lung abscess five years. 6. Lung abscess with two rubber tubes healed in cavity and discovered two years later. 7. Wooden probe two years within an empyema.

In these cases the foreign bodies were localized and removed through external operation.

Dr. Beck demonstrated the case of lung abscess in which a pin tack had been removed, showing a new procedure in operation on lung abscess, by implanting a flap of skin five inches long into the lung abscess cavity, thus keeping it open to permit the cauterization with actual cautery of the bronchi which lead into the compartments of this abscess cavity. In this case several bronchial openings can be plainly seen to open into the cavity. This procedure can be done by indirect illumination with a head mirror, or through a rectoscope with direct light.

Thrombo-Angietis Obliterans (Intermittent Claudication)

Dr. Lewis L. McArthur, Chicago:

There occurs in the relatively young of neither diabetic, syphilitic nor angio-neurotic types, a spontaneous gangrene termed thrombo-angietis by Buerger, and spontaneous gangrene of the young by Koga, a common occurrence among his countrymen, and almost limited in this country to the Jewish race. Mayesima determined the constant high viscosity of the blood in all cases of gangrene. Acting on this Koga confirmed Mayesima's findings and reduced the viscosity by diluting the blood with physiological solutions (Ringer's). Cases, which in the past were invariably condemned to high amputation, he succeeded in curing by the simple expedient of hypodermoclysis of sufficient quantity (Ringer's solution) and over a sufficient period of time to reduce the viscosity of the patient's blood.

The testimony of all those who have faithfully carried out Koga's recommendation verify his claims.

Dislocation of the Knee

Dr. Joseph Ransohoff, Cincinnati, Ohio:

A paper on this subject with X-rays, showing an anterior and external dislocation, with rotation to an angle of 90°. The man had fallen from a height of approximately 48 feet, sustaining at the same time a fracture of the lower jaw. The circulation of the leg was interfered with, as shown by sinusitis below the knee, although pulsation could be felt in both dorsalis pedis and posterior tibial arteries.

The dislocation was easily reduced and the functional result at the end of six weeks practically restored. The X-ray interpretation of the slight fracture of the spious process of the crucial ligament was somewhat dubious. There was no displacement at any rate of the small fragments.

These cases of dislocations are rare, since in a large traumatic service of the Cincinnati General Hospital this was the third case which had been admitted in the past twenty-seven years. The writer thinks the dislocations are perhaps more common than hospital records would indicate, since such dislocations are easy of reduction and are perhaps often reduced by the first aid Samaritans before patients are admitted to the hospital, or seen by the surgeon.

From the record not more than 250 cases can be collected. These accidents sometimes occur to a

number of individuals at the same time, as in a remarkable report by Eames, who found five dislocations among the eighteen miners who were precipitated down a mine shaft. They were all anterior dislocations.

The gravity of the injury depends upon the damage to the popliteal vessels. Of this there was a suspicion in the case presented, but evidently there was only a temporary pressure on the vein. In very many instances gangrene followed upon rupture of the artery or vein, or both.

Foreign Bodies in the Urinary Bladder

Dr. E. Starr Judd, Rochester, Minnesota:

The paper embraces a report of seven cases of foreign bodies found in the urinary bladder, exclusive of pieces of broken catheter, or surgical instruments. This series includes three hairpins, a 22 rifle bullet, a piece of chewing gum, a fragment of bone, a part of a jack-knife blade. Bodies lodged in the bladder are prone to incrustation from salt deposits, though some materials as this piece of bone seem to be immune. The stone with the foreign body as a nucleus is usually of considerable size before the patient's symptoms compel him to seek the aid of a physician. Pain and burning on micturition, pus and sometimes blood, frequency or retention and marked urgency, are frequently the symptoms complained of. Attention is called to the fact that foreign objects found in the bladder have usually gained entrance through the urethra, though in two cases reported by me, namely, the bone and jack-knife blade, this could not have occurred. There is no question but that these foreign bodies got into the bladder through the side wall, producing few, if any, symptoms, during the time they were passing in, though very careful examination of the inner lining of the bladder at the time of the operation did not reveal any scars or permanent injury to the bladder wall.

(Continued in Our Next Issue)

NEW AND NON-OFFICIAL REMEDIES

Since publication of New and Non-official Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies:"

Cephæline—An alkaloid obtained from ipecac. It is relatively more emetic and less nauseant than ipecac and causes more renal irritation and less cardiac depression. It may be used as an emetic and expectorant. It is insoluble in water, but forms water soluble salts.

Syrup Cephæline, Lilly—A non-proprietary preparation containing cephæline hydrochloride, equivalent to $\frac{3}{5}$ grain cephæline per fluid ounce. Eli Lilly and Co., Indianapolis, Ind. (Jour. A. M. A., June 19, 1915, p. 2067).

Ouabain Ampules, H. W. and Co.—Each ampule contains 0.5 mg. crystallized ouabain. Hynson, Westcott and Co., Baltimore, Md. (Jour. A. M. A., June 19, 1915, p. 2067).

Intestinal Stasis, Ptosis and Constipation

have assumed today an importance which the medical profession never before imagined. This is because the toxemia which may accompany these conditions, with its train of detrimental results, has been demonstrated, while the fact that cases may be treated successfully by the physician, is recognized.

It has been shown that Ptosis, Intestinal Stasis and Constipation do not necessarily occur together. Each may exist by itself, or any degree of combination of two or all may obtain. The essential matter is to prevent the toxemia by preventing an abnormal delay in the passage of material along the gastro-intestinal tract and by hindering development of bacteria.

The medicinal remedy, *par excellence*, is, by common consent, LIQUID PETROLATUM, *Heavy*, administered early in the case and persisted in until a cure is had, or until it is demonstrated that surgical conditions prevent results.

We therefore wish to call the attention of the medical profession to

Liquid Petrolatum, Squibb (Heavy, Californian)

as especially suited to relieve constipation and to prevent alimentary toxemia. It is colorless, tasteless, neutral and non-irritating. It exceeds the quality requirements of the United States Pharmacopœia and the British Pharmacopœia, and is the purest and best mineral oil to be had. It is superior in essential respects to similar products, whether of Russian or American origin.

E. R. SQUIBB & SONS, New York

CHANGES OF LOCATION

Dr. Enos Mitchell, of Cainsville, Mo., formerly of Weldon, Iowa, has recently located at Grand River.

Dr. J. A. Pines, of Garden City, has removed to Melrose, Mass., where he will have charge of an adventist sanitarium.

Dr. J. W. Lynch, of Ossian, has sold his practice to Dr. F. H. Fillenworth, of Iowa City, and will remove to Charles City, where he will continue the practice of his profession. Dr. Fillenworth has lately been associated with Dr. Jungblut, of Tripoli.

Dr. P. B. Glew, formerly of Des Moines, is now located at Dallas Center.

Dr. P. R. Wild, of Le Mars, has removed to Rock Valley.

Dr. J. H. Merrick, recently medical and surgical interne at St. Elizabeth's Hospital, Chicago, who has been assisting Dr. Edward Hornibrook, of Cherokee, will permanently locate in Cherokee.

Dr. J. E. Luckey, of Vinton, has been appointed a delegate from this state to the Twelfth Annual Conference on Medical Education, Public Health and Legislation which is to be held at the Congress Hotel, Chicago, February 7th and 8th.

Dr. H. Sweet, of Fontanelle, having sold his practice to Dr. Elwood R. Stroup, of Afton, Okla., will remove to Brookfield, Ill.

Dr. A. L. Arneson, of Forest City, has removed to Scarville.

Dr. Morton P. Morse, who has been assisting Dr. George Kessel, of Cresco, has entered the city hospital of Minneapolis as an interne.

Dr. J. D. Dunshee, of Keystone, has sold his practice to Dr. Thomas Byrnes, of Clutier, formerly of Davenport.

Dr. F. E. Peters, of Earling, has removed to Dunlap.

Dr. S. E. Bigelow, formerly of Eagle Grove, has located at Greene.

MEDICAL NEWS

Dr. H. H. Clark, of Las Vegas, New Mexico, has located in Decorah.

Dr. A. J. Swezey, of Decorah, is taking a post graduate work on the eye, ear, nose and throat, in Chicago.

Dr. Walter Johnson, a graduate of the Medical Department of the University of Illinois, has located at Shenandoah.

Dr. A. J. Burge, of Iowa City, has accepted a position on the surgical staff of the new Mercy Hospital at Mason City and has removed to that place.

Dr. H. G. Langworthy, of Dubuque, has been appointed state manager for Iowa of the committee on conservation of vision of the American Medical Association.

Dr. Lenna L. Means, of Des Moines, was appointed a member of the directory board of the American Association for the study and prevention

of infant mortality at the recent meeting of the association held at Philadelphia.

Dr. D. S. Bradford, of Janesville, recently celebrated his seventy-fifth birthday. About eighty friends gathered at his home to do him honor on this occasion. Dr. Bradford is in active practice, and has practiced in Bremer county for forty-five years, giving liberally of his time, thought and energy for the good of the community.

HOSPITAL NOTES

Agatha Hospital, Clinton, receives \$5,000 from the late Charles F. Curtis, of Clinton. The Young Men's Christian Association and the Associated Benevolent Society of Clinton also received \$5,000 each.

Bellevue Hospital, at Muscatine, sustained serious damages by fire supposedly caused by crossed electrical wires, December 22nd. Many assisted in the removal of patients from the burning hospital to nearby private homes, Hershey Hospital and Hotel Muscatine. The excitement incident to the rescue work, the sight of flames and smoke filled rooms, had a serious effect upon some of the patients who were critically ill. Much credit is due the nurses of the institution who assisted in the rescue work.

The contract for the erection of the Mary Greeley Memorial Hospital, the gift of Capt. Wm. Greeley to the City of Ames, was recently let to Arthur Neumann & Co., of Des Moines, for \$37,644. The hospital complete will cost about \$80,000. The building will be a concrete structure 42x114 feet, three stories, modern equipment throughout. Capt. Greeley's gift includes four lots. Another beautiful monument in memory of his wife is the Mary Greeley Mausoleum just completed. Ames and vicinity are to be congratulated in having such a large hearted citizen as Capt. Greeley, one of the pioneers of Story county.

Abraham Slimmer, Dubuque's generous hospital contributor has recently contributed \$1,000 for a play ground at the Nathan Mark's Jewish Hospital, Chicago; also \$25,000 to the Marmodies Hospital, Chicago, his gifts to this hospital totaling \$64,000. The hospital while under Jewish management is non-sectarian. Mr. Slimmer has also donated to the Finley Hospital, Dubuque and the St. Joseph's Mercy Hospital, Waverly.

The Scott County Hospital for the care of tuberculous patients, representing an investment of \$75,000 in real estate, buildings and equipment, has proved to be an institution of untold benefit not only to individuals suffering with tuberculosis but also to the general health and safety of the community. Patients in all stages of the disease are received and one of the greatest advantages is in securing the isolation of advanced cases.

From thirty-five to forty cases are cared for at the hospital. During the first six months, the average daily cost per patient was \$2.42, and for the remaining eleven months the cost was \$2.02, and a still further reduction is anticipated for the coming year.



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Kryptoks
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DES MOINES, IOWA

P. O. Box 856

With Our Advertisers

POISONOUS FLY PAPERS

A year ago, in discussing this subject editorially, we gave a partial report of the cases of arsenical poisoning of children from accidentally consuming the contents of fly destroying contrivances during the summer of 1914. It was gratifying to note the number of medical journals that reprinted our editorial or commented upon the subject. The discussion was evidently a timely one.

For the summer of 1915 we have been able to secure the reports of the following cases:

| Month | No. | Fatal | Recovery Indicated | Recovery Doubtful |
|--------------|-----|-------|--------------------|-------------------|
| May | 1 | 1 | .. | .. |
| June | 2 | .. | .. | 2 |
| July | 5 | 2 | 2 | 1 |
| August | 14 | 5 | 8 | 1 |
| Totals..... | 22 | 8 | 10 | 4 |

These cases were reported by the daily press as occurring in the following states: Georgia, 1; Illinois, 6; Indiana, 2; Iowa, 2; Massachusetts, 2; Michigan, 2; Missouri, 1; Nebraska, 1; New York, 1; Oklahoma, 1; Ohio, 1; Pennsylvania, 2; a total of twenty-two cases. This report must necessarily be considered as very incomplete and but an indication of the possible extent of a wholly preventable danger.

We again point out the fact that the symptoms of arsenical poisoning are very similar to those of cholera infantum and that undoubtedly a number of the cases of cholera infantum that occurred were really cases of arsenical poisoning, and death if occurring, was attributed to the fact. The cases reported were of children ranging in age from one to six years. These little patients are not old enough to tell what they have taken when questioned as to their illness and unless they are seen consuming the fly poison the actual cause of their sickness or death is overlooked and the fatality ascribed to cholera infantum or to some other similar causes and the error in diagnosis goes undetected.

We, repeat, arsenical fly destroying devices are dangerous and should be abolished. Health official should become aroused to prevent further loss of life from their source.

Our Michigan legislature, this last session, passed a law regulating the sale of poisonous fly papers. Similar enactments should be secured and enforced in every state of the Union. (From the Journal of the Michigan State Medical Society, Nov., 1915.)

AGAR IN CHRONIC CONSTIPATION

As is perhaps generally known to physicians, Agar (sometimes designated Agar-agar) is a Japanese

gelatin derived from seaweed. This substance has the natural property of absorbing water readily, and retaining it. It resists the action of intestinal bacteria, as well as that of the enzymes. Its use in the treatment of chronic constipation is based upon the fact that when ingested it passes practically unaltered into the intestine, where it adds to the bulk of the feces and thereby stimulates peristalsis; also it softens hard and dry fecal masses, thus favoring normal evacuation.

Park, Davis & Co. supply a superior quality of Agar in granular form, which is very convenient for use and free from the somewhat unpalatable character of the ordinary commercial product. It is marketed in pound and quarter-pound cartons.

One or two heaping tablespoonfuls, according to individual requirements, taken morning or evening, at meal-time, with milk or cream or mixed with a cereal food, usually produce the desired result.

THE SANITARIUM IDEA

The Sanitarium idea in this country is approaching its fiftieth anniversary. The Battle Creek Sanitarium, the first institution of its kind in the United States, will celebrate its golden jubilee this year.

The origin of the Sanitarium dates back to 1866 when it is related a little band of men who believed in altruism and human progress purchased a small two-story farmhouse in a fine grove in the edge of the village of Battle Creek, and opened a "water-cure" under the name of "The Western Health Reform Institute."

Ten years later the enterprise, after having passed through various vicissitudes and having failed to achieve any considerable degree of success, was placed in the hands of the present management, with twelve patients and a half dozen small two-story wooden buildings.

The management of the new institution sought, by the aid of the various means of precision afforded by scientific medicine, to perfect, and thus place upon a scientific basis, those natural curative agencies which, having chiefly originated with the laity, were formerly employed almost exclusively by empirics.

Even the word "Sanitarium" owes its place in the language to Dr. J. H. Kellogg, superintendent of the Battle Creek Health Resort.

When he took charge of the Sanitarium it was known by the cumbersome title: "The Western Health Reform Institute." The first act of the young superintendent was to discard the awkward name and rechristen the institution "The Battle Creek Sanitarium." During the half century, more than 100,000 patients have been treated at Battle Creek.

The Journal of the Iowa State Medical Society

Vol. VI

DES MOINES, IOWA, FEBRUARY 15, 1916

No. 2

ROENTGEN OBSERVATIONS RESPECT- ING THE CAUSE AND TREATMENT OF CONSTIPATION*

JAMES T. CASE, M. D., Battle Creek, Michigan

Assistant Surgeon and Roentgenologist to the Battle Creek
(Michigan) Sanitarium;

Professor of Roentgenology, Northwestern University Medical
School, Chicago;

Attending Roentgenologist St. Luke's Hospital, Chicago.

The application of the roentgen method to the investigation of the colon has upset many of our ideas relating to the morphology, position and mechanical behavior of this organ. The earlier studies of both stomach and colon were begun at a time when the question of prolapsus of the abdominal viscera was receiving special attention. It was but natural, therefore, that the earlier gastrointestinal X-ray studies should have been carried on with special reference to morphology and position, a coincidence which undoubtedly helped the medical profession to attach undue importance to the form and position of the colon as having a direct bearing on intestinal stasis. Even now, in the minds of many, the terms "prolapsus" of the bowel and "intestinal stasis" are synonymous expressions, just as the terms "intestinal stasis" and "alimentary toxemia" have been erroneously considered synonymous. With increasing experience, however, the morphological factors have shrunk in importance, while the questions relating to the function of the bowel have assumed greater significance. The prolapsed colon is not necessarily the seat of stasis. A patient in whom intestinal stasis is evident may not be exhibiting any signs of alimentary toxemia.

Of all the various findings which can be recorded about the stomach or bowel by roentgen examination, the question of prolapsus, is, in the mind of the writer, the last one thought of and the one given the least consideration as far as its direct results are concerned. Indirectly, through duodenal pathologic changes intestinal prolapsus may deserve careful study. In other words, prolapsus is looked upon as a symptom rather than a causative factor, although it is conceded that

in certain cases prolapsus, though at first a symptom, may later become a part of a vicious circle and thus assume importance as a causative factor. The work of C. A. L. Reed on periduodenal disease associated with bowel prolapsus is very suggestive.

We have come to recognize that the position of the transverse colon as seen on a roentgenogram is no criterion of its shape or position at another time. Reference will again be made to this point later. It will suffice here to call attention to the fact that our ideals as to the position of the stomach and bowel have been materially changed by our roentgen studies. The writer has just examined thirty women students who believed themselves in normal health. In twenty-seven out of the thirty, the level of the transverse colon reached well below the navel—in many of them low down into the true pelvis. In only three was the transverse colon so high as to reach within an inch of the navel, even with the patient lying supine. In only three out of the thirty did the lower border of the stomach reach so high as a point an inch below the navel (with the patient standing). One of these three students was short and stout so that both the stomach and transverse colon reached higher than usual. One had a duodenal ulcer and the third had evident gall-bladder disease with adhesions. In the other twenty-seven cases, the lower border of the stomach averaged two and a half or three inches below the navel, when the patient was standing.

For many of the symptoms formerly attributed to prolapsus, we are now finding more tangible lesions. Chronic appendical disease, constricting Jackson's membranes, membranous veils about the hepatic flexure, adhesions in connection with gall-bladder disease, torsions and twistings of the transverse colon due to adhesions of the omentum, especially adhesions and spasticity of the iliac and pelvic colon, and occasionally malignant disease, may be revealed by the roentgen examination where formerly the symptoms were supposed to be due to prolapsus. Multiple diverticula of the colon are occasionally found. But even when these special definite lesions have been discovered, the X-ray examination serves a much more valuable function in ascertaining the degree

*Read before Sixty-Fourth Annual Session, Iowa State Medical Society, Waterloo, May 12, 13, 14, 1915.

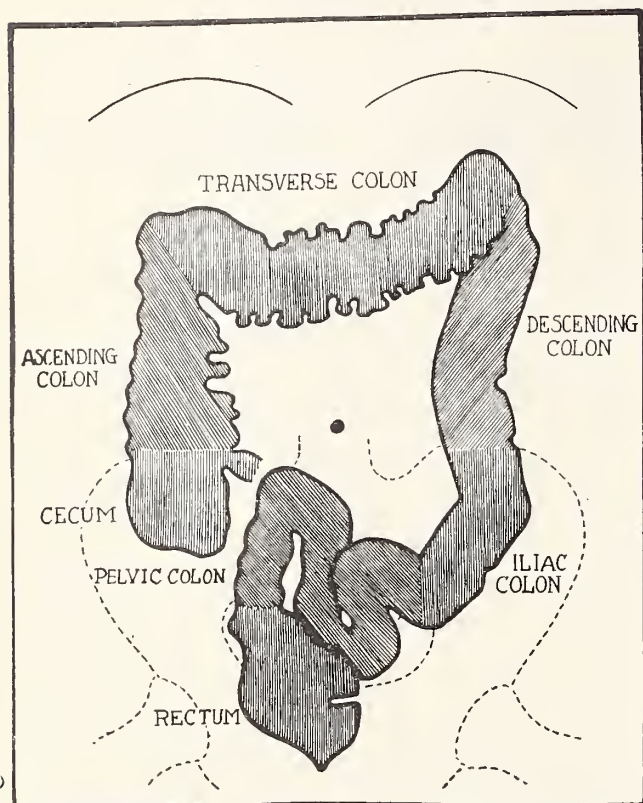


FIG. 1.—A tracing from a roentgenogram of the normal colon, showing the divisions of the colon according to the present terminology. The cecum, ascending and transverse colon are as usually understood. The descending colon extends from the splenic flexure to the iliac crest; the iliac colon from the iliac crest to the iliopectineal line; the pelvic colon from the iliopectineal line to the pelvirectal junction.

of interference with bowel function than in merely locating the position of the lesion.

The introduction of the roentgen method, especially in the work of Cannon which was carried out largely upon animals, has thrown much light upon the mechanical functions of the colon. The work of Rieder, Schwarz, Faulhaber, Arthur F. Hertz, and others has extended our knowledge, especially with reference to human beings. For several years, the writer's principal effort has been expended in the investigation of the colon.

The colon, in common with the entire gastrointestinal tract, has an inner circular and an outer longitudinal muscular layer. At three points on the circumference, the outer longitudinal layer is thickened into three bands which are shorter than the section of bowel along which they pass, so that between these bands the wall of the colon is puckered (haustral formation). The folds, or haustra, into which the intestinal wall is puckered by the longitudinal bands on account of their shortness, are made up of all layers of the bowel wall. If the longitudinal muscles be removed, then the haustra are obliterated and the intestine lengthens about one-sixth. During roentgen examinations, one frequently sees the elongation of the longitudinal muscles with obliteration of the haustra. This is especially noted during the ac-

tion of a mass peristaltic wave, as will be described later.

The prevailing movement in that portion of the colon proximal to the junction of the right and middle thirds of the transverse portion, is antiperistalsis, consisting of a movement of waves backward toward the cecum. The effect of the antiperistalsis is to lengthen the stay of food residues in the cecum and ascending colon where some of the chemical processes active in the terminal ileum are continued.

Cannon found that these antiperistaltic waves originated in a tonic constriction ring which is normally found in the transverse colon just to the right of the midline. From this point these antiperistaltic waves travel toward the cecum. The existence of this tonic constriction ring has been the subject of considerable discussion, but its existence is proven by numerous clinical observations.

Boehm, experimenting on cats opened under Ringer's solution, saw a definite contraction ring corresponding to the ring of Cannon. From this ring, peristaltic waves traveled toward the rectum and antiperistaltic waves toward the cecum. The antiperistaltic waves were livelier than the

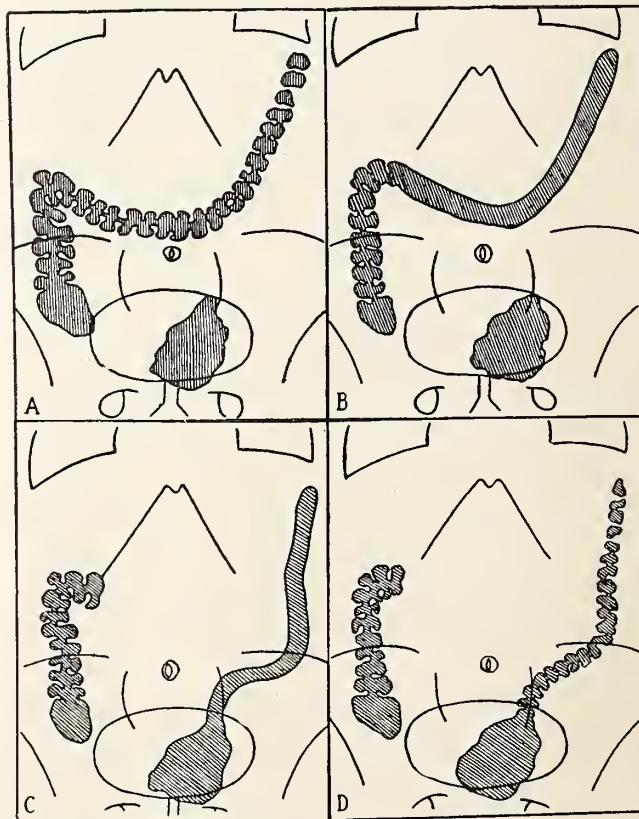


FIG. 2.—Four drawings from Holzkecht's original article illustrating the mass peristaltic movement. In *a* the colon is uniformly filled from cecum to splenic flexure and the indentations due to the haustral contractions are nicely seen. In *b* these haustral markings have disappeared from the hepatic flexure on. In *c* the content of the transverse colon has moved over into the descending and iliac colon, the haustral markings not yet having appeared. After some minutes, fifteen or twenty, the haustral markings reappear as shown in *d*.

peristaltic waves. This ring disappeared and reappeared from time to time. The same investigator, by means of the X-ray, has seen in human beings a narrowing of the transverse colon, usually to the right of the midline, with undivided contents between it and the cecum and with segmented masses between it and the sigmoid.

By means of the X-ray, the writer has seen this tonic constriction ring in man in a number of instances, some of which will be illustrated upon the screen. [A full description of the writer's experimental studies on this point were published in the Proceedings of the Seventeenth International Congress of Medicine, London, Section on Radiology, Vol. II, pages 11 to 42, inclusive, and in the Medical Record, March 7, 1914.]

Numerous other clinical observations might be cited in support of the existence of antiperistalsis in the normal colon. In this connection, however, it is especially important to recognize the fact that just as in obstruction of the pyloric canal, peristaltic waves in the stomach are exaggerated and antiperistaltic waves may be seen, so in obstruction of the colon, the antiperistaltic waves may be exaggerated in depth and frequency, and the point of origin of the antiperistaltic waves is moved distalward in direct ratio to the degree of the obstruction. In other words, when, for any reason, obstruction occurs in the distal colon, the antiperistaltic influences, which are normally seen

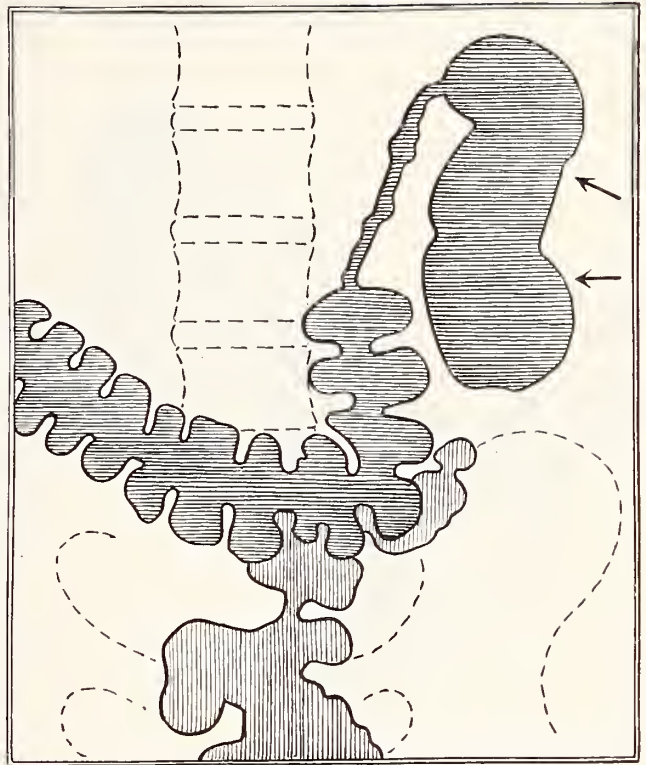


FIG. 4—A similar mass peristaltic movement which began in the left third of the transverse colon, and has gotten around the splenic flexure. Although observed for some time, it did not travel further, but within a few minutes (Figure 5) the haustral markings reappeared.

in the right half of the colon, are exaggerated. That this is true is further borne out by the observation that in patients with obstructing tumors of the pelvic colon, gangrene of the walls of the cecum may occur. Such cases have been reported by Anschütz, Kreuter and Roith, and the writer has seen one such case. It was noticed in several cases that the distal part of the large intestine near the tumor was contracted, whereas the cecum was very much distended. This condition must have been brought about through exaggerated antiperistalsis. In other experiments, lycopodium administered in enemas before operation has been found in the cecum at the time of operation. Retrograde filling of the colon is a constant finding after the operation of ileosigmoidostomy, unless the colon has been removed down to the point of anastomosis with the ileum.

It is therefore evident that when, for any reason, the colon is hypertonic, or its content increased through obstruction in the distal colon, the origin of the antiperistaltic waves is moved distalward so that in the severest cases they may begin in the iliac colon. The writer has seen antiperistaltic waves originating in the iliac colon. Recognizing the existence of antiperistalsis, it is therefore not surprising that in cases of obstruction in the distal colon there should develop a considerable enlargement of the right half of the

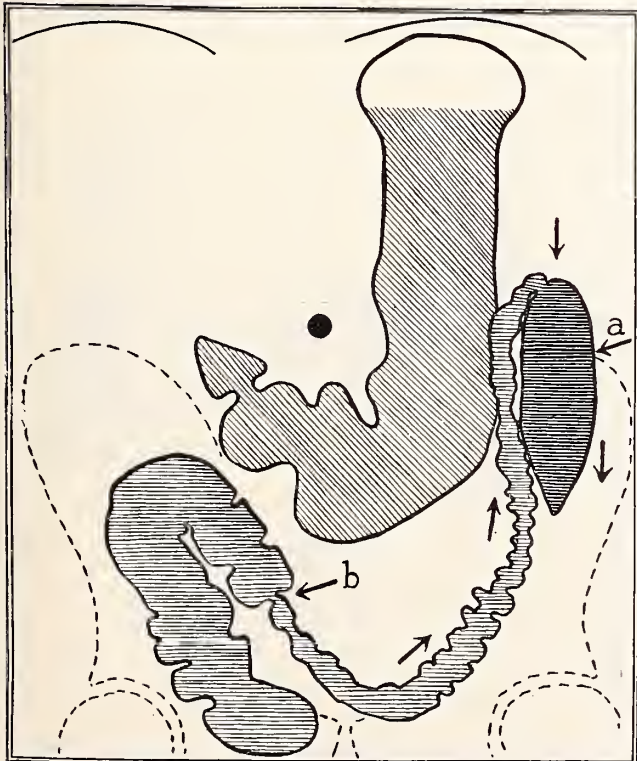


FIG. 3—An active mass peristaltic movement shown at *a*. This mass began at *b*, rapidly traversing the transverse colon and the splenic flexure. Within a few seconds it will reach the rectum.

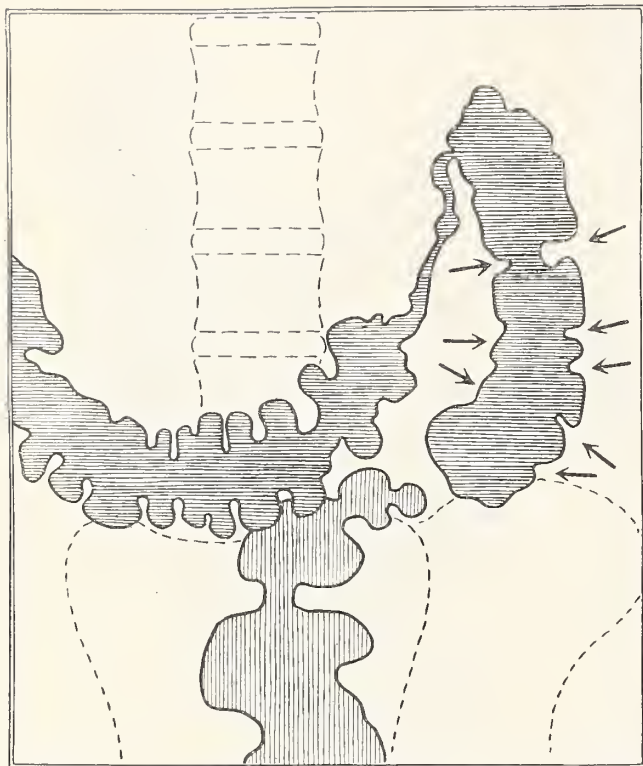


FIG. 5—The smooth-edged mass referred to in Figure 4 now shows serrated margins, owing to the gradual indentation of the reoccurring haustral markings.

bowel, and that the stay of food residue in the right half of the colon, which is ordinarily somewhat prolonged through the normal antiperistaltic influences, should be lengthened in direct ratio to the degree of obstruction in the distal colon.

The other movements of the colon may be classified as the churning and the propulsive movements. The churning or segmentation movements are occurring constantly in the distal colon, serving to keep the material in this portion thoroughly mixed with the digestive fluids. This churning is analogous to the segmentation which occurs in the small bowel. These churning activities in the colon are not visible on the fluorescent screen as the movements are very slow and the bowel wall makes very small excursions. Serial roentgenograms made at half-hourly intervals demonstrate without any doubt that such a movement is occurring. As they have no definite direction and often neighboring portions of the bowel move in opposite directions, their effect upon the transportation of the bowel contents can not be very important.

Rieder, in 1913, discovered a peculiar kind of dislocatory movement of the colon, which consists simply of a considerable dislocation, turning and winding of those portions of the colon which have a long mesocolon. For instance, at one observation the transverse colon may be almost en-

tirely above the umbilicus. Half an hour later it may be deviated downward to the left of the umbilicus. After another half hour, the transverse colon may represent a V with the apex low in the right iliac fossa. All of this may have taken place without any actual movement of the contents of the colon. Rieder's observations, which have been abundantly confirmed in the writer's experience, show that these snake-like dislocatory movements occur in everybody in varying degree and with varying frequency. These large pendulum movements, as Rieder called them, are probably brought about through activity of the smooth muscle bundles in the meso-colon, which were described by Rost. The longitudinal muscles may participate in these variations of the curve of the transverse colon by stretching or contracting.

The principal propulsive activity in the colon, serving to move the bowel contents from the proximal colon into and through the distal colon, is the sporadic mass movement first described in 1909 by Holzknecht. This most striking phenomenon, once seen, can never be forgotten. A segment of the bowel contents suddenly loses its haustral markings, and is formed into an ovoid, sausage-shaped mass with perfectly smooth edges, rounded at the ends. This mass travels at about twice the rate of peristaltic waves in the stomach, the distance traveled varying with the circumstances. As the mass comes to rest, the haustral

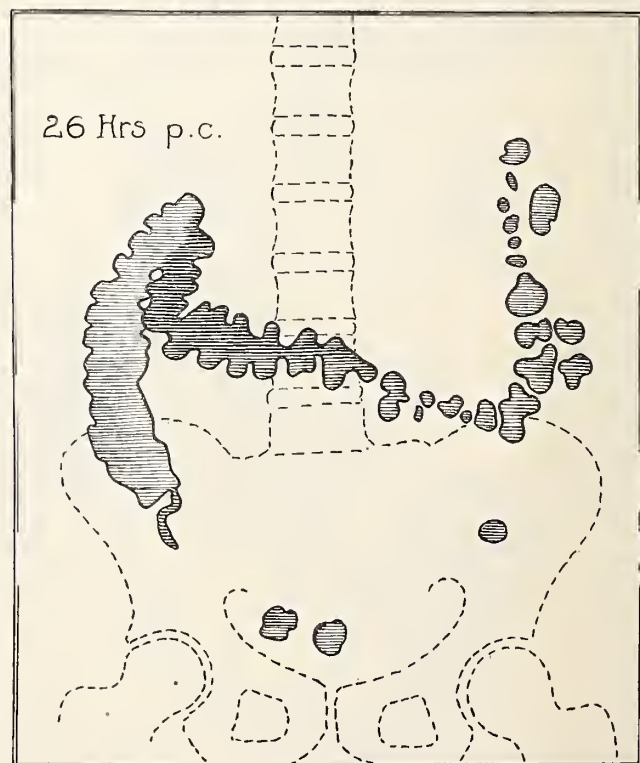


FIG. 6—Spastic colon at the fiftieth hour following the barium meal. Note the isolated boluses, the spasticity being especially marked in the pelvic colon. This variety of spasticity is characteristically seen in colitis.

indentations reappear, quickly if the bowel contents be semi-fluid, more slowly if the bowel contents of firmer consistency. This mass movement was formerly considered rare, but since the horizontal fluoroscope has come to be more extensively employed, this form of peristalsis has been more frequently recognized.

The filling of the stomach and the movement of the colon by respiration are also important factors in the shifting of the colon contents. During inspiration it can be seen on the screen that the transverse colon is depressed together with the diaphragm, and during expiration returns to its former position. The two flexures share in these movements, though the parts located down in the abdomen, the cecum, ascending colon, descending colon and sigmoid, are only slightly affected by the respiratory movements.

The contents of the colon can be shifted very little by palpation. Even with strong pressure of the palpating hand, it is not possible to lift the contents of the ascending colon into the transverse. Neither is it possible to promote the contents of the transverse colon into the distal portion of the bowel. In only a few cases has it been possible to effect any movement of the bowel contents, even for short distances. Grœdel was unable to accomplish this with a vibrator in full action. The writer has occasionally been able to move a small bolus of food along several inches

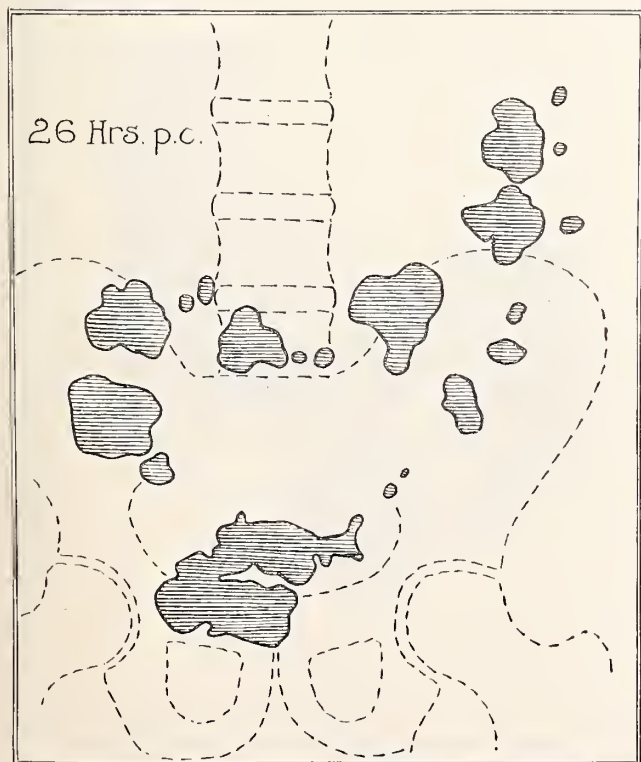


FIG. 7—Appearance of the colon twenty-six hours p.c. in a case of paraplegia. As contrasted with Figure 6, the spasticity in this case involves the entire colon.

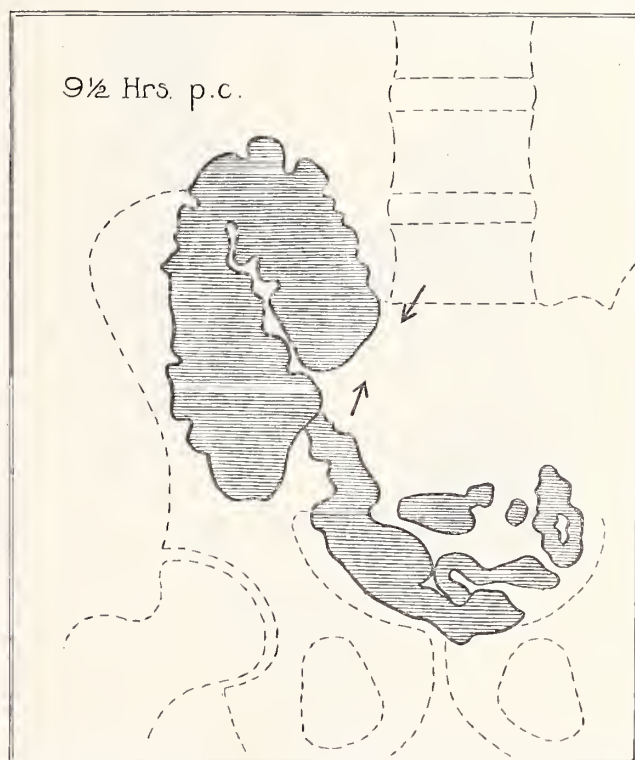


FIG. 8—Cannon's ring in the transverse colon just to the right of the midline. Note how the contents of the proximal bowel are held back by antiperistaltic waves, as Cannon has shown. This roentgenogram was made nine and one-half hours after the meal.

of gas-distended colon, but in general it holds true that the contents of the colon can be shifted very little, if any, by palpation. When the abdominal walls are very thin, one may, under the fluorescent screen, by gripping the bowel very heavily with the finger-tips, effect a slight movement in the contents of the colon for short distances. The reason for this difficulty in moving the contents of the colon by any such mechanical movement as above described is that the colon attaches itself very closely to its contents and grasps it by means of the haustral contractions, so that the haustra represent just so many grips or brakes upon the bowel contents.

In view of the foregoing we must conclude that the well recognized favorable influence of massage and mechanical vibration must therefore be produced indirectly through increasing the tone of the bowel muscle rather than through any actual mechanical pressure of the bowel contents onward.

Let us revert to a discussion of the morphology of the normal colon. It has long since been recognized that the normal, as described from post-mortem and operating room studies, differs notably from the appearance of the living active colon as seen in the roentgen examining room. The most satisfactory study of the colon is possible only after a barium meal. The clysma-filled colon is often very much distorted. How dis-

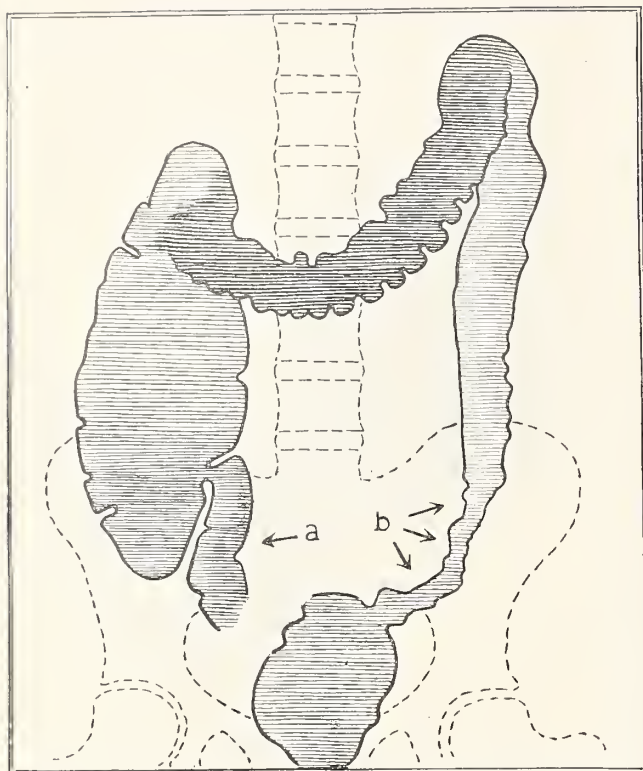


FIG. 9—Enema-filled colon. Marked spasticity of the iliac and pelvic colon; marked dilatation of the right half of the bowel; ileocecal valve incompetency. Compare the appearance of the enema-filled spastic colon as shown here with the spastic colon shown fifty hours after the meal in Figure 6.

torted it is, is very easily demonstrated by a few roentgenograms of the clysma-and meal-filled colon of the same individual. The use of the Trendelenburg or knee-chest position during the injection of the enema may lead to serious misunderstanding as to the morphology of the colon. Furthermore, it is easier and more satisfactory to palpate the colon when it has been filled per os than when filled per rectum.

As already suggested, the writer feels that the shape and position of the colon deserves comparatively little attention, less than is usually given it. Comparative studies on the same patient under the same circumstances will easily demonstrate how variable is the position of the colon and hence how little reliance can be placed upon its location and shape at any one time. Within five or six hours the transverse colon may assume half a dozen different shapes. The calibre of the colon changes materially from observation to observation, depending upon a number of factors, particularly upon the volume content of the colon.

The writer ventures the following description of what he considers a normal colon. At any rate, it may be called an ideal colon. With the patient standing, the lower border of the cecum reaches as low as the iliopectineal line. The hepatic flexure extends upward as far as the costal margin. The splenic flexure reaches as

high as the lower border of the spleen. The level reached by the lowest border of the transverse colon varies considerably in different patients, as well as at different times in the same patient. The shape of the normal colon varies with the type of individual. In short, stocky people, tending to obesity, the transverse colon, as well as the lower border of the stomach, is usually high, the lowest border of the transverse colon approaching a line joining the iliac crests. In tall, slender individuals, the transverse colon is apt to be V- or U-shaped, its lower border normally reaching several inches below the line joining the iliac crests, although in this same type of individual, the transverse colon may lie well above the navel when the patient lies supine. The junction of the iliac and pelvic colon is well rounded out, not sharply angulated. The pelvic colon is very variable in length and disposition.

The colon should be freely movable throughout at all points which can be reached by the manipulating finger. It should be possible to move the tip of the cecum and terminal ileum upward for two or three inches, and the ascending colon laterally for a distance of an inch or two. The hepatic flexure is not often within reach of the palpating fingers, although at times the right half of the colon is so very mobile that the cecum, ascending colon and hepatic flexure can all be pushed over to the left side of the midline. The transverse colon itself is rarely adherent, al-

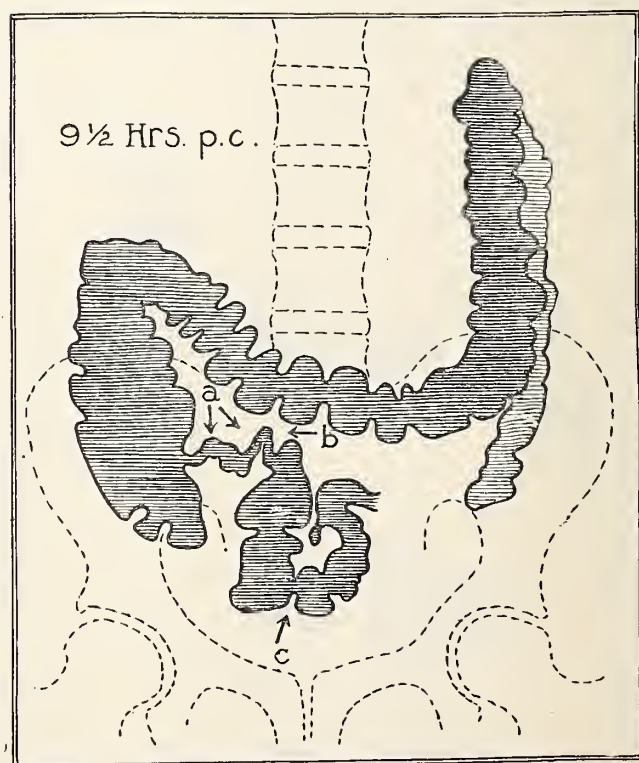


FIG. 10—An obstructing Lane's kink of the ileum. Arrow *a* points to constricted ileum between the kink and the cecum. Arrow *b* points to the kinked ileum. Arrow *c* shows several coils of dilated ileum proximal to the kink.

though sometimes it is bound down in certain positions by adhesions of the omentum. The two legs of the hepatic loop, that is the upper part of the ascending colon and the first part of the transverse colon, should be freely separable from each other. The same is true of the two legs of the left flexure, although it is extremely rare for adhesions to exist between the two legs of the splenic loop. The descending and iliac colon are usually fairly well movable, except at the junction of the iliac and pelvic colon, where the mesocolon is normally very short. The mesocolon is also very short at the pelvi-rectal junction, but the pelvic colon itself should be freely movable. In heavy patients, it is not always possible to test the mobility of the pelvic colon by actual manipulation of its loops, but even in these cases, accurate deductions can be drawn from a comparison of the height reached by the pelvic loop during the filling of the colon by enema.

After the injection of 1,200 c.c. of opaque enema, the following may be taken as the average diameters of the various segments of the adult colon on a roentgenogram made at focus-skin distance of twenty-six inches, the patient lying prone upon the plate.

| | Normal Colon | Spastic Colon |
|------------------------|--------------|---------------|
| Cecum | 6.0 cm. | 6.0—10.0 cm. |
| Ascending Colon | 5.0 " | 5.0— 7.0 " |
| Transverse Colon | 5.0 " | 4.0— 6.0 " |
| Descending Colon | 4.5 " | 3.0— 4.0 " |
| Iliac Colon | 4.0 " | 2.0— 3.5 " |
| Pelvic Colon | 3.5 " | 2.0— 3.0 " |

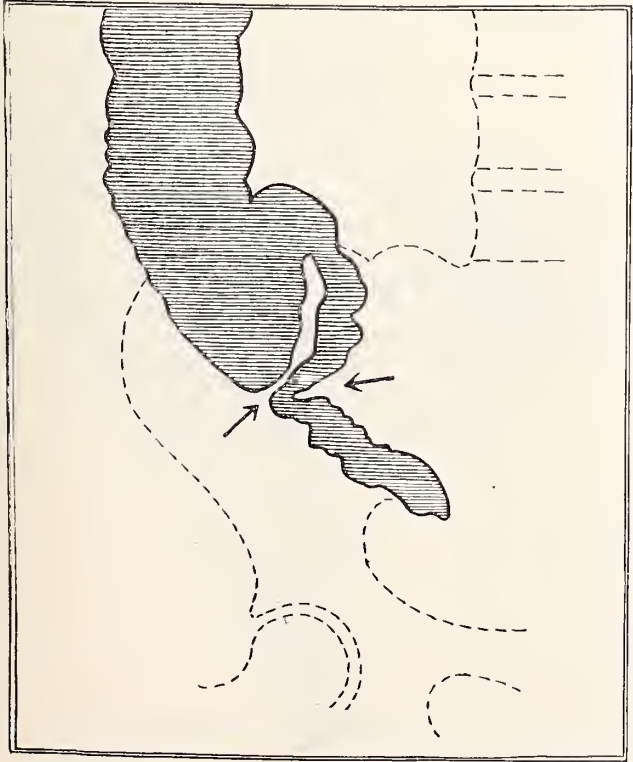


FIG. 11—This case illustrates adhesions (at arrows) of the terminal ileum associated with appendix disease. Under fluoroscopic screen manipulation, it was impossible to separate the shadows of the cecum and terminal ileum because of the binding adhesions.

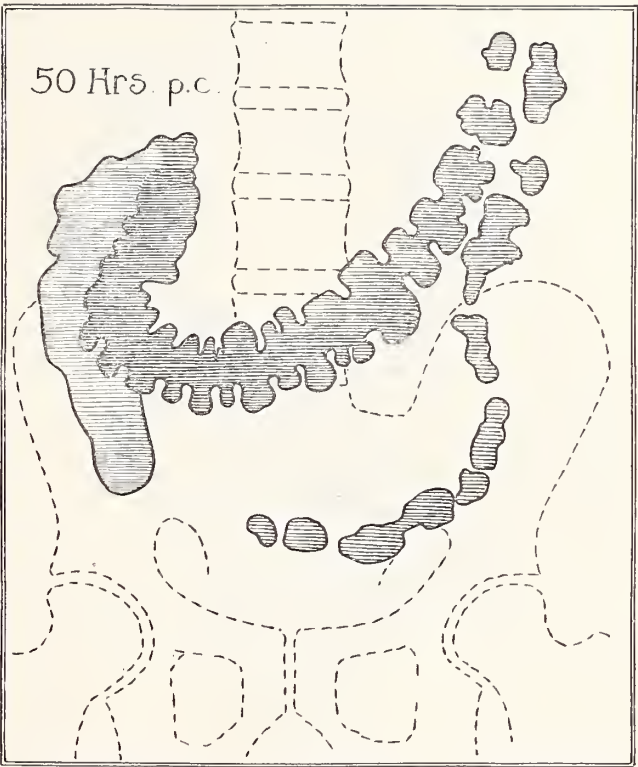


FIG. 12—Roentgenogram made at the fiftieth hour in a case of very marked spasticity of the colon, with colonic stasis. Note the spasticity in the left half of the bowel, as indicated by the isolated boluses. Right half of the bowel still filled—marked delay.

This spasticity of the left half of the bowel may be indicated roentgenologically in several ways.

a. By the appearance of isolated boluses in the left half of the bowel when the study is made following a barium meal. The more spastic the bowel, the fewer and smaller the boluses.

b. A small quantity of barium enema will suffice to fill the colon as far as the splenic flexure. The right half of the bowel is usually dilated and the ileo-cecal-valve incompetent, permitting the enema to flow backward into the terminal ileum.

Furthermore, c, on repeated observations during two or three days following a barium meal, there is seen a marked delay of intestinal contents in the proximal colon, the cecum and ascending colon remaining filled as late as the fiftieth hour following the meal. Both the distension of the right half of the bowel and the degree of delay are exaggerated by the administration of common laxative. This point will be considered further in later paragraphs.

d. The association of this spastic condition with colitis is frequently suggested by the appearance of barium-impregnated mucus, either in flecks distributed over the surface of the bowel, or in long strings which are easily demonstrated on fluroescent screen examination. This condition of spasticity of the iliac and pelvic colon is very often associated with adhesions, which are described in various ways, sometimes by the

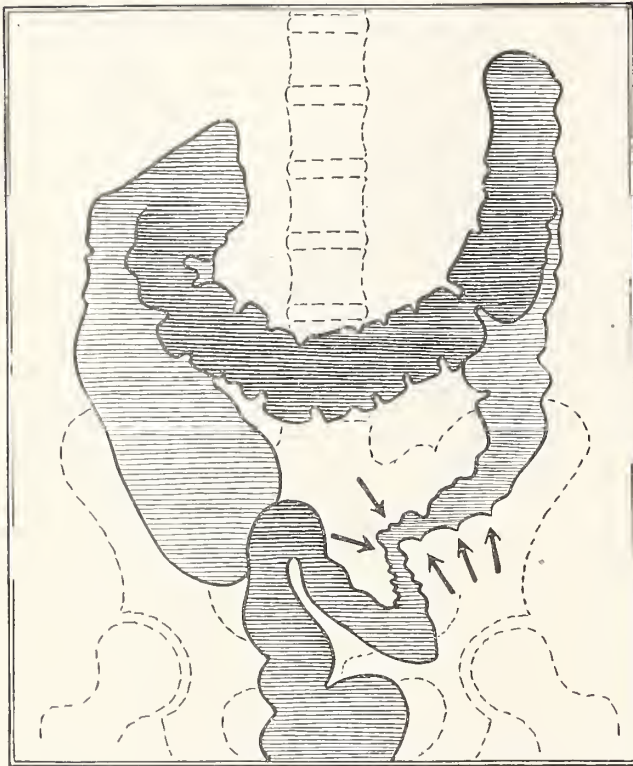


FIG. 13—Characteristic appearance of the enema-filled colon in a case of pelvic colon adhesions (at arrows). It should be remembered that the iliac colon normally has a short mesocolon, but in this instance, there are, in addition, obstructing adhesions.

roentgenographic appearance of the bowel, but more often and more reliable by manipulation under the fluorescent screen, or by failure of the pelvic loop to move upward during the colon injection in the way we believe it normally should move under pressure of the enema. Very often these adhesions of the pelvic colon involve the left tube and ovary.

The pelvic colon is a reservoir in which occurs the collection of bowel residues until such time as the pelvic loop is filled. Then mechanically the head of the fecal mass enters the rectal ampulla, the defecation reflex is stimulated, and the patient, when normal, is conscious of the filled bowel. When, for any reason, the patient ignores this reflex, we may assume the conditions are favorable for colitis to occur, with later a subinfection of the pericolic tissues and resulting pericolic adhesions. The roentgenologic appearance under these circumstances is a marked spasticity of the bowel, as above described.

It is noticeable that the stasis in these cases does not occur in the left half of the colon just proximal to the spastic, adherent portion, but as far as possible from it, that is, in the cecum and ascending colon, to which point the bowel contents are carried by the exaggerated antiperistaltic influence which results from the spasticity. Even with carcinoma of the distal colon, as in the sigmoid, for instance, there is a tendency for the

stasis to occur in the proximal colon. There is often seen in these cases of organic obstruction in the distal colon a condition which the writer has termed "peristaltic unrest," signifying the appearance due to alternating peristaltic and antiperistaltic influences. Thus, at one observation, one may find the colonic contents banked up in the distal colon just above the obstruction, and again it will be seen in the proximal colon as far as possible from the obstruction. The latter disposition of the fecal content is apt to predominate.

The distension of the cecum and ascending colon is often so marked that it is not at all surprising that the ileocecal valve should show incompetency or that the appendix should show poor drainage. Under the influence of the antiperistaltic influence associated with obstruction in the pelvic colon, the resulting stasis in the cecum could hardly end otherwise than in appendical stasis and relative insufficiency of the ileocecal valve through stretching of the walls of the cecum. The incompetent valve may thus serve to cause ileal stasis, either through actual regurgitation of material from the cecum back into the ileum, or through a lessening of the *vis a tergo* in the terminal ileum so that while there may be no actual regurgitation of cecal material into the ileum, there is a slowing of the ileal stream which will be in effect a condition of stasis.

The majority of patients in whom this condi-

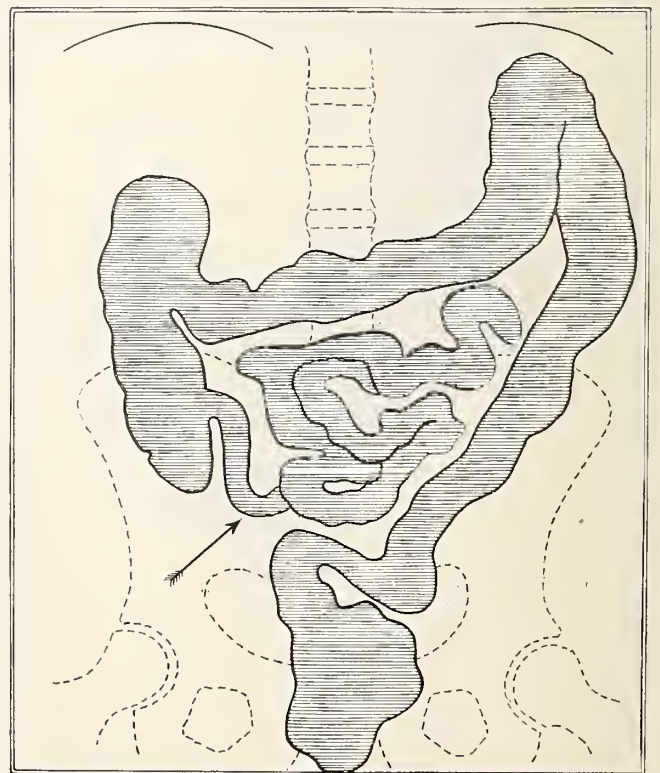


FIG. 14—Incompetency of the ileocecal valve, permitting the enema to pass into the terminal ileum, filling it for several feet.

tion of enterospasm has arisen are not subjectively constipated. In many of them the bowels move regularly once a day. Yet on roentgen examination, it is seen that from fifty to seventy-five or one hundred hours are required for the barium residues to leave the colon. Occasionally one encounters a patient with marked cecal stasis, yet whose bowels move four or five times daily. Sometimes the patient reports the occurrence of twelve or fifteen bowel movements containing barium before the cecum is emptied. These cases often resemble the so-called gastrogenic diarrhea.

In the foregoing paragraphs the writer has given expression to his belief that in the majority of cases of constipation, the cause, when mechanical, is located below the crest of the left ilium and if not primarily due to spasticity, at least exhibits spasticity as an important factor. We formerly considered many cases of constipation as due to atony of the bowel muscles. We now have learned that in the majority of cases, the bowel is hypertonic, and we deal with a hyperkinetic constipation. Later, the distension of the right half of the bowel may give rise to atony of the cecum and ascending colon so that we deal with a combination of the atonic and hypertonic conditions, the so-called dyskinetic constipation, as Schwarz terms it. The stasis perhaps originally occurs in the pelvic colon, and being allowed to persist there, through neglect, gives

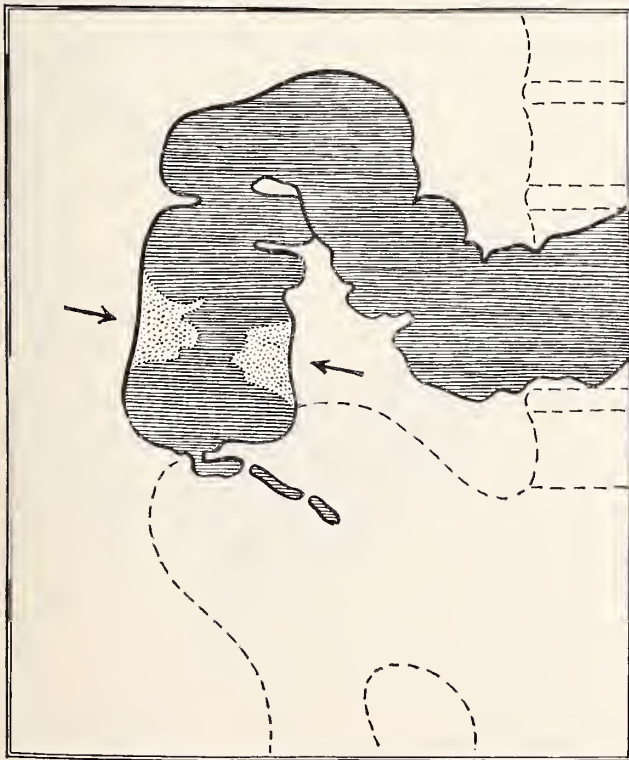


FIG. 15—Carcinoma of the cecum, the tumor projecting into the lumen of the colon, making it impossible for the colon to fill out normally. This ragged, annular filling defect is characteristic of a carcinoma.

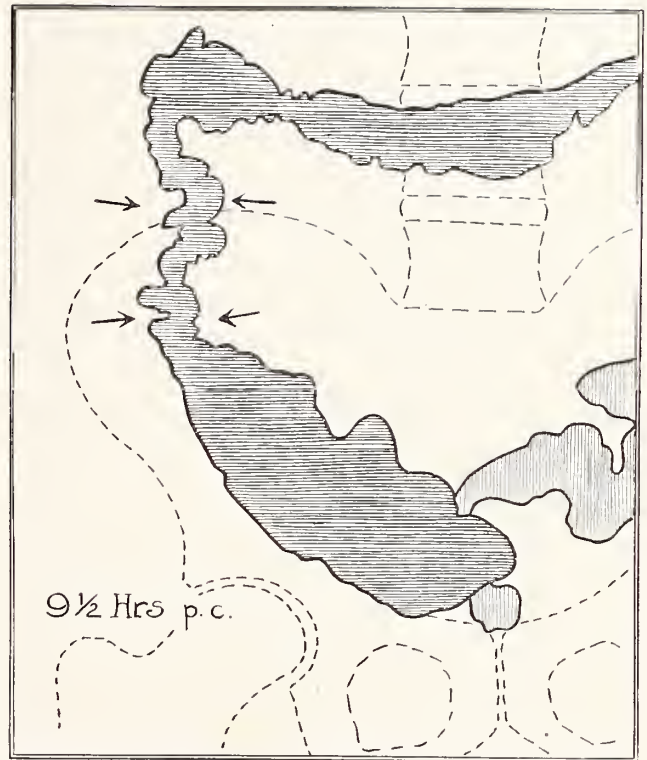


FIG. 16—Markedly dilated, atonic cecum, due to constriction of the ascending colon by Jackson's membrane. This roentgenogram was made at nine and one-half hours following the barium meal, showing the delay in the cecum.

rise to colitis, pericolic subinfection with adhesions, and spasticity. Doubtless many other factors are active, but these three just named may be considered as the active mechanical causes of constipation. As a result, the point of origin of antiperistaltic waves moves distalward, and the sum total of the antiperistaltic influence is increased. The right half of the bowel becomes the seat of stasis which is often attributed to unoffending membraniform adhesions and veils about the ascending colon and hepatic flexure. Chronic appendical and ileocecal valve changes supervene and finally the stasis extends to the terminal ileum, where its results are much more quickly felt by the organism.

We will now take up some practical suggestions concerning the non-surgical treatment of constipation which the foregoing statement leads up to, viz., the consideration of the value of the common laxatives, the enema, the colon tube, massage, electrical stimulation, deep breathing and certain questions relating to diet. Most of these suggestions have been utilized in the practice of the writer's colleagues. The writer feels that some of the points are new and are worthy of study in this connection. It is fully appreciated that in certain selected cases surgery is the method of choice.

I. *Laxatives*—Practically all laxatives which are irritant in their action are seen to increase the

spasticity which is so common in cases of constipation. The following case will serve to illustrate this finding: Mr. J. C. M., was referred by Dr. E. L. Eggleston for possible gastric carcinoma. The examination, which resulted in a positive diagnosis, included a study of the bowel, as is our custom. The head of the barium column reached the hepatic flexure by the fourth hour and the splenic flexure by the ninth. By the twenty-sixth hour, the right half of the bowel was already partially emptied, and by the fiftieth hour the colon had been completely cleared of the barium residues. In other words, the behavior of the colon was quite normal. The colon was normal in size, shape and position. The pelvic colon was freely movable, and spasticity was not mentioned among the findings. This examination, in accordance with our custom, was carried out without the preliminary administration of laxatives. Several days later, permission was given to operate. In order to secure a stereoröntgenographic record of the tumor, the writer called for the patient the day before the operation and gave him a new barium meal. Having made the stereoröntgenograms, the patient was given the usual dose of magnesium citrate in order to clear out the bowels in preparation for the operation. Instead of emptying easily, as was the case during the previous examination, there was now observed a notable distension of the cecum, ascending colon and right half of the transverse. Antiperistaltic waves were seen in the right half of the transverse colon and in the ascending colon. The left half of the colon was very spastic, whereas spasticity had not been mentioned among the previous findings. The spasticity in the pelvic colon, the antiperistalsis and the resultant delay in the cecum and ascending colon were so marked that even after the administration of fifteen or sixteen enemas, the patient went to operation without having cleared the cecum and ascending colon of the barium residues.

This is only one of many similar observations, our findings confirming the clinical studies of Abt, who found that all the common laxatives were irritant. Most constipated patients need anti-spasmodics, not irritants, and for this class of patients belladonna is more appropriate than cascara.

Most useful of all preparations in these cases is paraffin oil in one of its forms. The writer's experience with paraffin oil has been very satisfactory. The use of agar agar has also been attended by beneficial results. The plain agar agar serves best except in the relatively rare cases of atonic constipation. The addition of cascara to

the agar agar (Regulin) produces the same irritant effect as the ordinary laxatives.

Briefly stated, the writer is convinced that the common drug laxatives are contra-indicated in most cases of constipation; that if medicinal aids are required, paraffin oil and agar agar preparations are more appropriate, perhaps with the addition of some anti-spasmodic, as belladonna.

2. *The Enema*—Earlier in this paper attention has been called to the fact that colonic stasis occurs particularly in two places, viz., in the pelvic colon and in the cecum. Cecal stasis occurs in conditions of chronic appendical disturbance with or without adhesions, with those rare cases of Jackson's membrane where the upper fibres constrict, and particularly in that large class of individuals where, through spasticity of the pelvic colon, there is secondary distension and delay in the right half of the colon. That these are the usual sites of stagnation is evinced by the fact that carcinoma occurs most frequently in these two portions of the bowel. Carcinoma rarely occurs in the transverse colon, which would naturally be the seat of stasis should one find the delay due to the drag of the ptosed colon upon the high flexures. The remedy for stasis in the proximal half of the bowel excluding, of course, those instances of appendical involvement with pericecal adhesions and obstructing bands along the ascending colon, is a therapy calculated to overcome the spasticity of the iliac and pelvic colon.

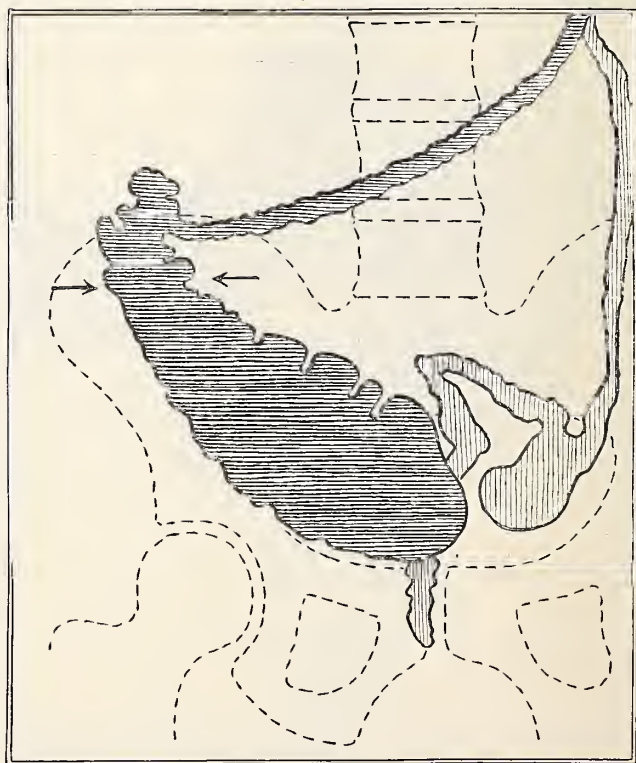


FIG. 17—Same case shown in Figure 16 following the attempt to expel the barium enema.

A different therapy is needed in cases of rectal and pelvic colon stasis. When the stasis occurs in the rectal ampulla, excluding local lesions, it is through neglect to respond to natural reflexes. The resulting condition of rectal stasis is termed dyschezia. It seems unreasonable to administer a laxative which will irritate twenty-five feet of bowel in order to evacuate the contents of the last twelve or fifteen inches of colon. Here enemas are indicated, and small enemas at that. A small, cold enema, is often enough to produce a thorough evacuation of the bowel. Such patients need training, special emphasis being laid upon the necessity of responding to the slightest stimulation of the defecation reflex.

The "high" enema is a misnomer, and should be rarely, if ever, attempted. The work of H. Wellington Yates, which has been confirmed by numerous investigators, shows that it is impossible to introduce a colon tube higher than the junction of the iliac and pelvic colon. For years the writer has had a standing offer of a cash prize in the hydropathic department to any attendant who could introduce a colon tube higher than the iliopelvic junction. Although numerous attempts have been made to claim the prize, none have yet succeeded. Even with the sterile hands working within the open abdomen, it is very difficult for the surgeon to pass into the descending colon a tube which has been put into the rectum by an assisting nurse.

What is more, the colon tube is quite unnecessary for a high enema. Perhaps six thousand times the writer and his colleagues have watched the introduction of the barium enema. Only in those cases of organic bowel obstruction has the head of the barium enema failed to reach the cecum within a few moments. The average amount of fluid necessary to reach the cecum was 1200 c.c., the pressure being that afforded by having the enema container two and one-half feet above the patient. No colon tube was ever employed—only an ordinary rectal point, inserted just past the sphincters, the patient lying flat upon the back. Very rarely indeed has it been necessary to resort to the knee-chest position. When the knee-chest position has been used, the resulting distortion of the colon has been very confusing. In the light of our experience, it is difficult to understand how harm can fail to result from the introduction of such large enemas as one often hears of. A two-quart enema is a very large one; a three-quart enema exceeds the limit of safety.

The writer would suggest the following plan for clearing out the patient's alimentary tract: We will suppose that the last meal was taken at

six P. M. By ten-thirty or eleven, the stomach is empty and the first portion of the meal to leave the stomach has reached the hepatic flexure. By six or seven the next morning, the food is all in the colon, whence it may be dislodged by enemas given in the manner above described. Not over two and a half or three pints should be injected at a time. The patient should be encouraged to retain each enema at least five minutes before expelling it, the process to be repeated twice, providing the preceding enemas can be returned. If the patient has eaten no breakfast, the alimentary tract is then emptied. The writer would suggest this method as preferable to laxatives in preparation for abdominal operations.

3. *Massage*—Reference has already been made to the practical impossibility of moving the contents of the bowel distalward as the direct result of manipulation. Abdominal massage therefore does not result in a true passive stool, but is only a mechanical stimulant for the circulation of blood in the intestine and its mesentery, and acts through the beneficial effect upon the tonus of the bowel wall. It is also probable that massage, especially when directed over the cecum, acts in a special way to stimulate the occurrence of the mass peristaltic movements which are recognized as the principal propulsive activity of the colon. In connection with the writer's observations on colonic peristalsis, he has dictated careful notes to a stenographer either during the occurrence of the mass movement or immediately afterwards. After a careful comparison of the memoranda made in each of these cases with reference to the taking of a meal, the occurrence of massage, electrical treatments, the drinking of cold water, manipulation under the fluorescent screen, previous movement of the bowels, etc., it was apparent that the most constant factor which might be considered as bearing a causative relation to mass peristaltic movements has been manipulation of the colon through the abdominal wall. This has occurred as a kneading of the abdomen or of the colon as a definite massage treatment, or in the form of manipulation in connection with the examination, especially when the manipulation or kneading has been directed over the cecum during efforts to test the mobility of the appendix.

4. *Electrical Stimulation*—Special observations have been made on the effect of electrical stimulation. Lack of space forbids a detailed record of the experiments. Briefly, it may be stated that when constipation is due to inertia of the pelvic colon (above referred to as dyschezia) the colon may be stimulated by sinusoidal or galvanic stimulation administered with a bipolar

electrode, as suggested by J. H. Kellogg. Our experimental studies demonstrate that a unipolar electrode within the bowel does not suffice to produce an actual contraction of the bowel wall, although occasional direct benefit may be secured through the resulting contraction of the abdominal muscles.

5. *Deep Breathing*—The beneficial influence of deep breathing upon colon peristalsis has been suggested in an earlier paragraph. This effect is exerted not upon those parts of the bowel which lie below the crest of the ilium, but upon the flexures and the transverse colon, and then only provided the patient's diaphragm moves appreciably during respiration. In the costal type of breathing the transverse colon and the flexures scarcely move; hence if one expects that deep breathing exercises will have a beneficial effect upon colonic peristalsis or upon the circulation through the liver, the respiration must be diaphragmatic, not costal.

6. A few remarks seem in place regarding the defecatory act. Earlier in this paper reference has been made to the striking phenomenon of mass peristalsis. Holzknecht believes that this mass peristalsis occurs five or six times daily. The writer has seen it most often under the following circumstances: (1) following deep manipulation of the cecum and ascending colon (above noted); (2) following shortly after an evacuation of the bowels; (3) immediately following a meal. The well-known favorable influence of massage has been discussed. This suggests that the most favorable time for bowel evacuation is shortly after massage or some active exercise, and not too long after a meal. This further suggests that the bowels should move three times a day, or at least once after each meal. Some find the bowels move most easily after a few moments' activity on arising in the morning.

The frequent observation of mass peristaltic movements shortly after the bowels have moved suggests the advisability of a longer time spent in the defactory effort. Most constipated individuals do not devote sufficient time to the accomplishment of a thorough bowel evacuation. The pelvic colon is the reservoir, not the rectum itself. The pelvic colon rises as it fills, exercising a sort of pendulum action. When filled, it over-flows into the rectum and the defecation reflex is stimulated. In the haste of modern busy lives, there may be a tendency to discontinue the effort of bowel evacuation after expelling the content of the rectum only. A little patience will

give more time for the mass peristaltic movements (which, as we have often seen, are especially apt to occur immediately after defecation) to carry more material from the proximal into the distal colon, whence it also can be evacuated, providing the individual remains at stool a sufficient length of time; or if this be not possible, a second bowel evacuation should be attempted within twenty or thirty minutes following the first.

When by reason of adhesions, pelvic tumor, etc., the pelvic loop is so bound down that it cannot exercise this pendulum action and rise during its filling from above, it is highly improbable that any amount of non-surgical treatment will afford permanent relief. It is in this class of cases, with redundant, prolapsed adherent pelvic colon, usually attended by spasticity, that operative treatment gives most satisfactory results. In a general way the writer lacks enthusiasm when considering surgery for the relief of constipation; yet some most brilliant results have attended operation in carefully selected cases. This type of adherent prolapsed pelvic colon, when the adhesions have been broken up and the pelvic loop attached in a hammock suspension, gives most gratifying results.

7. *Diet*—It goes without saying that the composition of the diet has a very important bearing upon the results of stasis. The bacterial flora of the colon can be influenced readily by a proper regulation of the diet. This has been especially referred to in a recent paper by Brown of Baltimore.

The diet may effect the mechanical function of the bowel in at least three ways. (a)—If the diet be insufficient in bulk, the normal stimulus of the bowel contraction will be deficient. (b)—Especially in cases of spastic constipation, any condiments or other irritating substances in the diet will tend to increase the spasticity, and stasis in the right half of the bowel. (c)—When stasis does occur in the right half of the bowel, an excess of putrescible substances in the bowel (proteins) will encourage a bad flora and the result may be intermittent diarrhea with a cecal stasis.

The writer has not made any pretense to a set summary of this subject. As the roentgenologist in a large institution where a large proportion of the patients complain of constipation, his observations have led him to feel that the foregoing suggestions are important, and he therefore presents them for your consideration with the hope that they may prove helpful.

REPORT OF RUPTURED UTERUS IN A
COUNTRY PRACTICE*

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Uterine rupture may occur during pregnancy, when it will be either spontaneous or the result of traumatism; or it may occur during parturition, as a feature of dystocia.

There are two classes of uterine rupture: (1) the complete, where the peritoneal cavity is opened; (2) the incomplete, where the muscle is torn, but the peritoneum remains intact. Rupture is more common during labor than as a complication of pregnancy.

While some writers maintain that rupture of the uterus during labor is of rare occurrence, J. B. DeLee says that it is not so rare an accident as is generally believed. C. H. Davis, in his recent extensive review of the subject, says that the frequency of uterine rupture varies in different parts of the country, being most common where the percentage of pelvic deformities is highest. Rupture of the uterus is said to be more common in multipara, one authority giving the proportion of the latter when compared with primipara as eight to one.

With regard to the etiology of rupture of the uterus, Davis classifies the predisposing causes as follows:

1. *Uterine*—(a) retraction ring; (b) prolonged or dry labors; (c) cicatrices following cesarean section, previous rupture, or trauma; (d) placenta prævia; (e) degenerative changes in the musculature; (f) hydramnion; (g) high amputation of the cervix; (h) fixation operations; (i) congenital hypoplasia of the uterus; (j) tumors of the uterus; (k) antelexion of the uterus; (l) congenital and acquired stenosis of the cervix; (m) hydatiform degeneration and thinning of the wall.

2. *Fetal*—(a) deformity of parts, as hydrocephalus or monstrosity; (b) malpositions and malpresentations, as transverse, face, or brow; (c) large fetus or twin pregnancy; (d) more frequent with male than with female children.

3. *Pelvic*—(a) contracted or deformed pelvis; (b) obstruction of the pelvic canal by new growths or prolapsed organs.

4. *Vaginal*—(a) stenosis, accidental or congenital; (b) incomplete septum and bands; (c) exceptionally tetanic contraction of the levator ani muscles.

5. *Intra-uterine Manipulations*—(a) manual or instrumental dilatation of the cervix; (b) in-

strumental deliveries—all types; (c) version; (d) manual removal of placenta.

Davis adds that spontaneous rupture is less common than the traumatic, and that while the uterus is especially liable to injury during pregnancy, it is so well fortified against all sorts of contusions and pressures that ruptures are rare during this period. They do occur occasionally, however, from a fall, a kick, or such muscular exertions as sneezing, coughing, vomiting, or the lifting of heavy objects. The use of ergot in delayed labors has also been the cause of uterine ruptures.

"Rupture, however, usually results from ill-advised or faulty manipulations. * * * Undoubtedly unskilful use of instruments, manual procedures, and failure to recognize the dystocia are responsible for most ruptures."

According to Reed, rupture of the uterus during pregnancy usually occurs during the first six months, and he gives, as the most frequent cause, interstitial or cornual pregnancy, the average period of rupture in these cases being between the tenth and fourteenth week of gestation.

Concerning the symptoms and diagnosis of uterine rupture, Reed writes:

"Spontaneous rupture of the uterus during pregnancy may be so symptomless as to escape attention at the time of its occurrence. * * * In some cases, however, there is profound shock with the usual phenomena of hemorrhage, either concealed or external. If symptoms at the time of rupture do not attract attention to the occurrence, evidences of peritonitis will sooner or later manifest themselves. The patient will have noticed that conditions have changed. On palpation, if necessary under anesthesia, the fetus, if not susceptible of being definitely outlined, will be felt as a movable mass in the middle or upper zone of the abdomen."

There is usually sudden and severe abdominal pain in rupture of the uterus during pregnancy, the pain being usually followed by marked symptoms of collapse.

Rupture of the uterus during labor is attended with the following symptoms:

"Incomplete rupture of the uterus may be signalized by nothing more than an evanescent and not severe shock, a temporary interruption of the pains, and a persistence of hemorrhage after delivery. When the rupture is complete, however, the phenomena induced by the accident are striking and unmistakable. There is profound shock; the uterine contractions and pain cease instantly; the presenting part of the child recedes; the fundus of the uterus tilts to one side, or entirely disappears in the presence of a new, strange, and

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indefinite tumefaction within the abdomen; a bloody discharge makes its appearance; and frequently there is prolapse of the funis. A careful examination at this time will indicate not only a recession of the presenting part of the child, but an apparent atony of the cervical structures. If the child has escaped into the abdominal cavity the hand is introduced without difficulty into the uterus and may, in certain cases, be carried through the rent in the uterus into the peritoneal cavity." (C. L. A. Reed.)

Hirst believes that the most frequent cause of rupture of the uterus during labor is overdistention of the lower uterine segment, due to some obstruction which prevents the descent of the child through the pelvic canal; another factor being the ascension of the upper uterine segment by stretching the round ligaments, this adding to the tension of the walls of the lower uterine segment. He adds that a contracted pelvis is the most common cause of uterine rupture, one writer having found this condition the etiological factor in 570 out of 1218 cases.

"The best method of treating cases of rupture of the uterus is still one of the problems of obstetric medicine upon which a good deal of difference of opinion exists; nor, indeed, is it likely that this difference will be entirely overcome, since these cases may vary greatly both in the severity of the symptoms and in the degree of the injury." (G. Blackie.)

The above writer, a prominent London obstetrician, after discussing the treatment in a number of cases of uterine rupture, concludes as follows regarding the treatment of such cases:

"To sum up the treatment, then, of cases of rupture of the uterus as regards conservative treatment or laparotomy, I would say that while in cases of incomplete rupture gauze plugging or vaginal drainage may prove a useful method, in all cases of complete rupture the treatment most likely to give the best results in the future will prove to be abdominal section, followed by the removal of the damaged uterus and the provision of efficient drainage for the peritoneal cavity."

Treatment of rupture of the uterus, both incomplete and complete, are described by J. B. De Lee in an article published in the *American Journal of Obstetrics* for March, 1903, as follows:

"The most successful method of dealing with incomplete ruptures is the tamponade of the rent. Gauze is lightly packed into the cavity under the peritoneum, taking extreme care not to injure this delicate covering. If the hemorrhage is profuse the gauze packing will probably not stop it, even if strong counterpressure from the abdomen is made. It is usually impossible to control hemor-

rhage from below, and in these cases the abdomen must be opened and the broad ligaments and vessels clamped from above."

"In the treatment of complete uterine rupture there are six methods to choose from, viz.:

1. Delivery of the child from below, and expectancy; ice bag on abdomen, ergot, opium—i. e., symptomatic treatment.

2. Delivery of the child from below, tampon of the rent and the uterus; then same as No. 1.

3. Delivery of child from below, sewing up rent as far as possible, and tamponade of the remainder.

4. Vaginal delivery, followed by extirpation of the uterus from below.

5. Laparotomy; removal of child and placenta; suture of uterus.

6. Laparotomy; removal of child, etc.; partial or complete extirpation of the uterus."

"The first four methods presuppose the possibility of delivering the child from below. This is not always possible, or it may be inadvisable because of the danger of increasing the uterine lacerations. In cases of hemorrhage uncontrollable from below, and in cases of highly contracted pelvis, the laparotomy may become necessary. What to do with the uterus when the child, etc., have been removed depends on the conditions. If the case has been treated in a hospital and aseptically, the uterus may be closed with sutures or drained from below. If there is any suspicion of sepsis, the whole uterus should be removed, the peritoneum closed, and the subperitoneal space drained per vaginam. It is a question if the peritoneal cavity should be drained."

"Rupture of the uterus is an accident that occurs almost always at the home, and it is a complication that should, if by any means possible, be treated where it occurs. No case of threatening rupture of the uterus should be transported from place to place, and if the patient is to be removed from bed to table great care and gentleness are necessary. One of the cases referred to died as a result of uterine rupture that took place during transportation by ambulance over rough pavements."

"Since laparotomy is a very formidable operation in a private house and requires several hours for proper preparation, the accoucheur is right in choosing a method of treatment that quickest delivers the child, stops hemorrhage, and gets the patient into bed. This is all the more right since some large statistics show that such courses offer a better prognosis than the abdominal methods, and other statistics show as good results by either method."

"Of the four methods of treatment in which

the child is delivered from below, that offering the best results is the partial suture and drainage of the peritoneal cavity and the site of the rupture. Even in septic cases simple drainage offers much hope, but here the vaginal extirpation of the uterus is coming into vogue and when the hemorrhage is slight the latter operation may be practiced."

As to the frequency and deaths following ruptured uterus James W. Markoe, assistant surgeon of the Lying In Hospital of New York, reports 4,500 cases in which he gives ruptured uterus second place.

Valenta reports 1,350 cases with fourteen ruptures, eight were operated—three lived. All not operated died.

Freund reports seventeen authors who report one rupture to every 2,000 cases, does not give death rate. His individual reports are however one to every 234.

J. K. Quingley, of Rochester, New York, reports four cases following the administration of pituitary during labor.

In collecting cases from various doctors in my locality, a rural district, I requested each doctor to report the number of cases he had cared for—the number of ruptured uterus, also if any mysterious or sudden deaths following parturition, they could not account for.

The reports came in of over 10,000 cases including my own, with but one rupture.

It would seem from these reports and from reports gathered elsewhere, that the great variance would lead one to think, these reports were either in error or ruptured uterus in a country practice is indeed a rare occurrence.

But with statistics gathered from the busy practitioner in the country, we must not forget the short time devoted to these cases and the possible chance for error. Cases reported as follows:

W. C. Hess, M. D., of Cresco, Iowa, 993 cases; one mysterious death thirty minutes after forcep delivery. No hemorrhage visible. W. H. Emmons, M. D., Burr Oak, Iowa, 1,035 cases; one mysterious death twenty minutes after normal delivery. No hemorrhage. Geo. Kessel, M. D., of Cresco, Iowa, 1,436 cases. No rupture or deaths not accounted for. H. B. Amey, M. D., of Decorah, Iowa, 1,050 cases. No rupture. H. H. Thomas, 412 cases. No rupture; one death accounted for. Byron Lewis, M. D., of Ridgway, Iowa, 1,200 cases. No rupture. F. A. Hennessey, M. D., of Calmar, Iowa, 650 cases. No rupture. J. J. Daley, M. D., of Decorah, Iowa, 580 cases. No rupture; one hematoma. J. D. Hexom, M. D., of Decorah, Iowa, 763 cases. No deaths; no ruptured uterus; one still born; no twins; J. A. Juen, M. D., of Ossian, Iowa, 1,020

cases. No rupture; one complete eversion; no mysterious deaths. J. W. Lynch, M. D., of Ossian, Iowa, 940 cases. No rupture; one death by emboli; five pairs of twins; one case of triplets. My own cases—780 covering a period of eighteen years. One death from sepsis; one case of pyemia; one case of hydromany; two ectopic pregnancies; one ruptured uterus; three later operated and all lived.

The following is the report of the ruptured case:

Mrs. Z., aged thirty; mother of three healthy children, never called a doctor at any of her confinements.

Last baby was born in May. Ordinary, very ordinary neighborhood woman in charge. Three weeks after the child was delivered I was called.

Patient reported baby was born with ordinary labor excepting last pain which she said was the "most terrible one she had ever experienced." There was no history of hemorrhage or shock. Placenta delivered in ordinary mid-wife style, (Traheus in Fune) patient said she never experienced any chill or fever to her knowledge. Her appetite was poor and she failed to gain strength in her accustomed way. She was sitting in an easy chair, face drawn—eyes pale and set well back in dark rims of their bony orbits—lips pale—skin almost a septic hue—body was emaciated—pulse feeble—and a staggering gait when she walked. She had no symptoms to complain of and said, "Dr. I am all right only so weak, and don't get any stronger." Upon digital examination a foreign substance could be felt well up within a patchalus os. With a speculum and reflected light a white, shining, pedunculated body resembling the end of an appendix or folded supernumery cord, could be seen.

With ordinary dressing forceps I made traction on this loose frimbriated body, at the same time made gentle pressure over the fundus. While doing this patient complained of pain in the epigastrium.

Discontinued farther investigations and told patient and her husband there was something in the uterus. She was given a plesebo and told if she was not better in three days to let me know. The plesebo failed to give relief and on the third day I returned with an assistant and my trained nurse. Under anesthesia dilated the os and with placenta forceps carefully grasped the mass, and under slight and careful traction, kneading the fundus at the same time, a great mass consisting of about eight inches of the sigmoid flexor and omentum was drawn out into the vagina. We now had a positive diagnosis and a patient in a critical condition.

Under the surrounding conditions a laparotomy seemed out of the question. We were in an illy kept tenement house sixteen miles from a doctor, no screens upon the windows, myriads of flies swarming about the slop barrel just outside the door. The little 8x10 accouchment chamber just off the illy kept and poorly furnished kitchen, gave a still more depressing atmosphere.

Whatever was to be done must be at once. Re-

placing the gut through the rent and tamponading the uterus with sterile gauze was the method adopted. Time proved it the proper course as she made an uninterrupted recovery. Six months later she became pregnant; during the seventh month of gestation she made a quick run down a hill to close a gate where cattle were getting out—and was seized with a terrific pain. Baby was born on the door step as she was about to re-enter the house. I arrived three hours later and removed with a great deal of difficulty an adherent placenta. Sepsis followed and three months elapsed before she regained her normal health.

She is now well and strong and has not been pregnant in five years.

We trust this short research with reported case may serve as a stimulus for a more thorough diagnosis of every case of labor; that we may be in a better position to recognize and handle these impossible deliveries, thus saving, not only the timely life of the hopeful, expectant mother, but the child as well.

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DIABETES MELLITUS*

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In presenting the subject of diabetes mellitus, I do not presume to tell you anything new, but simply wish to call your attention to some of the newer conceptions of this disease and emphasize a few points which I believe to be of practical importance in its management.

The last generation has witnessed wonderful advancement in all branches of medical science. The laboratory and clinic have become closely associated, and as a result of their co-operation, many problems have been solved and others are nearing solution. The crude bacteriology of a generation ago has been crystallized into an effective applied science.

Its application to the prevention and cure of infectious diseases, has materially lengthened the average span of human life and increased the happiness and welfare of the whole race.

The newer researches have added much to our knowledge of dietetics and the chemistry of metabolism, both in health and disease. Yet with all the advancement in our knowledge of these branches, the disorders of nutrition are increasing. The death rate from this class of diseases, especially diabetes and its frequent associate, arterio-sclerosis, is actually greater today than a generation ago.

At a period no further back than the professional careers of some of you extend, diabetes in this country in comparison with the older civilizations, was considered a rare disease. Osler writing on this disease less than a quarter of a century ago, considered it only about one-fourth as frequent in this country as in Europe, while recent text-book writers agree that it now occurs with equal frequency here and in the older European countries. According to the last Federal census report, its ratio to population in the United States has increased about fifteen times in the last fifty years, and later estimates indicate this ratio is still increasing.

*Read before the Sixty-fourth Annual Session of the Iowa State Medical Society at Waterloo, May 12, 13, 14, 1915.

Our improved diagnostic methods and the more complete statistical reports of recent years, doubtless, account in some measure for this increase.

The practice of many physicians of including urinalysis in the routine examinations of their patients, results in the detection of many cases of mild glycosuria, which under less careful methods, were formerly overlooked. Yet after making due allowance for these factors there still remains little doubt, that diabetes, in common with other nutritional disturbances, is on the increase.

This situation deserves, and is receiving, the closest attention of both clinician and research worker, and while a specific remedy for this disease is, in all probability, a therapeutic impossibility, yet the remarkable results which are being secured, where modern methods of treatment are faithfully carried out, indicate what may be accomplished by close attention to details and persevering efforts along rational lines.

With our advancing civilization, the causes which directly or indirectly exercise disturbing influences on metabolism, are not only being multiplied but are operating with increased intensity and on more susceptible organisms, hence we are justified in concluding that diabetes, like arteriosclerosis and other nutritional disorders, properly attributed to the stress and strain of modern life, is also to some extent, one of the penalties exacted for civilization.

The evidence of this becomes more and more convincing as our knowledge of the chemistry of nutrition increases, and we more fully comprehend the variety and nature of the factors which disturb this process, and the channels through which they operate.

The immediate cause of diabetes is a disturbance of carbohydrate metabolism, resulting in hyperglycemia and glycosuria, but proceeding in either direction from this central fact we are confronted with uncertainty and confusion.

The underlying causes and the organs through which they operate to produce this disturbance, and the chemical processes resulting therefrom, have been subjects of controversy since the days of Pavy and Bernard, and after more than fifty years of experimental research in carbohydrate metabolism and its disorders, many phases of this intricate disease are still unsolved problems.

Many factors are known to be involved in its production, and the pathologic changes found are confined to no one organ. These facts, together with its varied clinical manifestations, have led many investigators to conclude that it should not be regarded as a single morbid entity, but rather as a symptom complex, depending on a great va-

riety of causes and different pathologic conditions.

During recent years the ductless glands have been subjected to a vast amount of experimental investigation. Their separate functions, and the influence of their correlated actions on metabolism, have been carefully studied. As a result of these studies, it is believed their internal secretions contain hormones, which beside other important nutritive functions, control the formation, distribution and utilization of sugar.

The experiments of Falta, Eppinger and other investigators, show these secretions exercise antagonistic influences on each other, and on the glycogenic function of the liver, and that normal carbohydrate metabolism depends upon a perfect balance of these actions being maintained.

These glands have been divided into two groups, according to the action of their hormones—an accelerator and an inhibitory group. The former is composed of the thyroid, hypophysis and the adrenals, or the chromaffin system. Experiments show all the glands of this group increase protein metabolism. In addition to this action, the adrenals cause mobilization of the carbohydrates, while the thyroid and hypophysis increase fat absorption.

The pancreas and parathyroids constitute the inhibitory group, they both retard protein metabolism and restrain the formation and mobilization of carbohydrates. It is generally assumed that these two groups oppose each other by direct action on the liver; von Noorden, however, believes that the thyroid, parathyroids and hypophysis influence the glycogenic function of the liver indirectly by first modifying the action of the internal secretion of the pancreas. The thyroid and hypophysis retard while the parathyroids increase pancreatic inhibition, yet in every instance, the experiments of the different investigators agree that the action of the pancreas is the more powerful.

Disease of this gland has long been considered a frequent cause of diabetes, yet it is only within recent years that this etiological relation has been demonstrated. Opie in 1900 in reporting the results of his studies on interstitial pancreatitis, demonstrated for the first time a connection between the islands of Langerhans and diabetes. He described two forms of chronic interstitial pancreatitis, an inter-lobular and inter-acinar type, and found that it was particularly with the latter that diabetes was associated. His work has since been confirmed by Joslin, MacCallum and a number of others, both in this country and in Europe. These findings leave little doubt that these islands furnish an internal secretion which

influences carbohydrate metabolism in a marked degree, and have been accepted by some investigators as conclusive evidence that a lesion or functional disturbance of the pancreas, involving these islands, is a necessary condition for the development of true diabetes. This so-called unitarian doctrine is supported by Minkowski and von Noorden, who hold that in all chronic diabetic disturbances of metabolism, pancreatic insufficiency is the controlling factor, and that all other factors which can directly or indirectly influence sugar production, are unable to produce a true diabetes when the pancreatic function is normal.

They recognize disease of the other glands as causes of the transitory glycosurias and also their importance as aggravating factors of the pancreatic type, yet they contend that when the pancreas is normal, it is sufficiently powerful to successfully antagonize the influences from all other sources, and after periods varying in length according to individual conditions, readjust the disturbed balance, resulting in the disappearance of the glycosuria.

Diabetes has been produced experimentally by many methods, a number of which correspond closely to the influences usually recognized as causes of the clinical variety. Injuries to the nervous system, both psychic and traumatic; injection of toxic drugs, foreign proteins and epinephrin; removal of the different ductless glands or traumatism of the same; excessive feeding of protein, especially when decomposed, or feeding glucose after partial excision of the pancreas and many other methods, have succeeded in producing glycosuria, but so far the only method which has succeeded in producing a type corresponding to true clinical diabetes is the removal of the pancreas.

By this method the severity of the type can be controlled almost at will according to the amount of the gland removed. A considerable portion may be removed without the occurrence of glycosuria if certain dietary restrictions are enforced, but when carbohydrates are added to the diet or the animal is subjected to any of the influences previously referred to, hyperglycemia will promptly occur, followed by the appearance of sugar in the urine and a severe or fatal type of the disease will result if the added influence is continued for sufficient length of time.

The unitarians contend that pancreatic insufficiency more satisfactorily explains the clinical manifestations of the disease than any other view, and enables the physician to more accurately estimate the influences which so often dominate the increase or decrease of diabetic glycosuria.

In health several times more sugar is metabolized in the tissues during active physical exercise than when at complete rest, yet the sugar content of the blood varies within narrow limits, being only slightly reduced during hard work. In diabetes it is constantly above the normal level, except in the so-called renal type where it is considerably lowered.

It is generally believed that the sugar forming process does not differ in diabetes from that of health, so far as quality is concerned, yet in quantity it is greatly increased and the ability of the liver to store it as glycogen is lost or much diminished.

Opinions differ as to whether the hyperglycemia is caused by over production of sugar or the inability of the muscle cells to utilize it. von Noorden holds to the over production theory while Lusk, Murlin, Minkowski and many other leading investigators believe it is due to the inadequate utilization of the carbohydrates. The latter hold that when an excessive production of sugar accompanies the inability of the tissues to burn it, the over formation is a secondary phenomenon, the outcome of sugar hunger of the tissues. This sugar hunger harmonizes with what occurs in health and is doubtless communicated to the liver in the same manner as in normal conditions. Its intensity, however, is increased in proportion to the inability of the tissue cells to convert it into energy. This excessive demand on an already hyperirritated sugar forming apparatus, leads to the formation of sugar from the proteins and von Noorden thinks possibly from the fats when a sufficient supply of the proteins is no longer available.

With the failure of the tissues to burn sugar, the fats are incompletely oxidized, resulting in the appearance of acetone bodies in the urine, the amount of which is usually taken as an index to the severity of the disease.

Little is known as to what form glucose circulates in the blood, whether in a free state or in some combination. Lusk believes it is loosely combined with a colloid substance and in this state cannot pass the glomerulus, but when the sugar accumulates above the combining power of the colloid, the crystalloid glucose readily passes through the kidneys.

The internal secretion of the pancreas is believed to furnish the combining substance or in some way control its action. This and many other conceptions of the disease are based on hypothetical considerations, yet a sufficient number of facts have been established on which to base a more effective treatment than the average diabetic has been receiving. And some of the

newer researches indicate the possibility of adding diabetes to the list of preventable diseases. But whether these possibilities are realized or not, they at least enable us to recognize the disease in earlier stages and institute treatment with better chances of preventing complications and a severe form of the disease from developing.

The recent experiments of Cammidge show that dextrine, an intermediate product of carbohydrate metabolism, regularly precedes the appearance of glucose in the urine. During this pre-glycosuric stage the sugar content of the blood is found to be increased and the carbohydrate tolerance considerably lowered. He believes the dextrinuria indicates incipient disease of the pancreas, and by proper restriction of the diet at this stage the disease in many instances, can be arrested before glycosuria occurs.

The fact is now recognized that we have not only faulty metabolism of the carbohydrates to deal with, but also of the other food stuffs, especially the proteins, and there is some reason to believe that disturbance in the metabolism of these products may precede that of the carbohydrates. Arterio-sclerosis, gout and obesity are frequently associated with glycosuria, and in many instances, antedate its appearance.

Lorand believes an excessive protein diet is one of the most frequent causes of the disease. We know the proteins are active stimulants of the entire chromaffin system and often aggravate an existing glycosuria. Nervous influences reach the chromaffin over the sympathetic and produce a similar effect. Muscular exercise, as we have seen, also stimulates sugar formation by increasing the demand for it. The intelligent application of this knowledge is often of valuable assistance in the general management of the disease. Emotional disturbances, worries, cares and excessive mental strain to some extent can be controlled, and to a greater extent physical exercise, and in severe cases, rest both mental and physical may be necessary and should be insisted on.

But by far the most potent factor in exciting sugar formation, is the carbohydrates coming to the liver from the intestine, and the one over which we have the most complete control. The control of this factor by proper regulation of the diet, constitutes the most effective means we have for combatting the disease, and when this can be done, there will be little use for drugs.

Perhaps one of the most important things we have learned during recent years about the medicinal treatment of this disease, is that most drugs are useless or at least unnecessary. The purpose for which they have been given is better served

by dietotherapy, and many physicians have abandoned their use, except for short periods to meet special indications, or where it is impossible to carry out proper dietetic restrictions.

The alkalies, opium, arsenic, bromides, salicylates and the lactic acid bacilli are all useful at times, perhaps in the order named. The bromides, in common perhaps with all sedatives, exercise their influence through the chromaffin system by cutting off impulses passing to it by way of the sympathetic nerves and thus lessen sugar formation indirectly by inhibiting adrenal secretion. Opium has a similar action but more pronounced, and in addition, retards the passage of the carbohydrates from the stomach to the intestine, consequently they are more slowly absorbed, giving the liver more time to dispose of them. How arsenic and the salicylates influence sugar formation is less well understood. They are both supposed to act on the hepatic cells and possibly influence their nitrogenous function. The former is known to favorably influence general nutrition and the latter is useful when there is evidence of rheumatism. Recently the lactic acid bacillus has attracted considerable attention. It is said to be specially useful when toxins are being absorbed from the intestinal canal. It probably possesses no advantages over lavage or catharsis for this purpose and is inferior to dietotherapy for modifying the intestinal flora. When acidosis develops and coma is threatening, the alkalies are indicated and their free use will often produce brilliant results. No one drug however can be useful in all cases nor will it be indicated at all times in the same case. Their continued use often does more harm than good as it has a tendency to engender lax methods in the diet. The indiscriminate use of opium in all cases is especially to be condemned. The increased tolerance of diabetics for this drug, does not prevent the formation of the habit, as many physicians have learned to their own and their patients regret.

The object in all diabetic therapy, according to modern conceptions, is to slow down the sugar forming machinery and give the over acting organs rest. To accomplish this something more is required than simply handing the patient a printed slip, designating what foods may be or may not be taken. The diet for each patient should be carefully worked out according to individual needs. Seldom two cases are equally benefited by the same diet, yet in the selection of a diet, certain general principles should guide us.

As the carbohydrates are the most active stimulants of sugar formation, they should be withdrawn and the patient placed on a fat-protein diet

until the sugar content of the blood is sufficiently lowered to prevent glucose from appearing in the urine. In mild cases this may be all that is necessary. In the more severe cases however, the sugar forming process runs riot. The carbohydrate group is readily split from the molecule of the protein food products, and the over formation of sugar is continued from this source.

This suggests the reduction of the proteins also, which has been found excellent practice in severe types. Meat protein being the greatest offender in this respect, with cheese a close second, they are the ones in which the reduction should usually be made.

The molecule of other proteins may have a greater carbohydrate content, yet they give it up less readily and their amino-acids are thought to be less irritating to the organs engaged in metabolizing sugar. This illustrates a truth which holds good in other nutritional diseases, that the chemical composition of a food product does not always determine its nutritive value.

In the reduction of the carbohydrates, the urine should be frequently examined for acetone bodies, the appearance of which in excessive quantities signifies danger of acidosis and necessitates a more gradual reduction of the carbohydrates. von Noorden thinks the danger from this source has been over estimated. From an extensive experience, he is convinced that except in childhood or hopeless stages in adults, where the ability to burn sugar is extremely low or lost, the organism is able to adjust itself to the abrupt withdrawal of the carbohydrates.

While the acetone bodies will rise at first they subsequently fall as sugar is soon formed in sufficient quantities from the proteins. Its formation from this source being less rapid is more completely utilized by the tissues, consequently the fats, the incomplete oxidation of which is the source of the acetone bodies, are more nearly reduced to their end products, a process which can only take place when carbohydrates are being burned.

When the urine is free from glucose, and the hyperglycemia is reduced to normal or approximately so, the carbohydrates should be gradually added to the diet until the limit is reached which they can be taken without the glycosuria returning. In this no fixed rules can be laid down, as they are not equally tolerated by all patients. One form of starch may agree with a patient at one time and not at another. The method of preparing, the time of giving, relative to other foods or the kind of food with which it is given, often makes a difference in its toleration. The newer researches show that starches are usually better

borne if taken after other food than when the stomach is empty; small amounts at short intervals are sometimes better tolerated than when the daily allowance is given at one time. Their tolerance is increased also when taken with fats because of less rapid absorption. A single carbohydrate is often better borne than its equivalent, or less, when composed of two or more. A reduction of the proteins also, or sometimes of the total food units, will enable the patient to utilize more carbohydrates than is possible otherwise. To illustrate: I have at present a diabetic patient under observation whose general nutrition is well maintained and whose urine remains free from glucose while on a diet consisting of eggs, bacon, green vegetables and moderate amounts of wheat bread and rice, but when the carbohydrates content of this diet is displaced by its equivalent in potatoes or other forms of starch, or when any considerable amounts of fresh beef, cheese or milk are added to the diet, the glycosuria promptly returns and the general condition becomes worse.

It is on these principles, which I have roughly outlined, that the various so-called carbohydrate cures for diabetes are based, and from which we are receiving so many favorable reports, both in this country and in Europe. Yet when we compare these reports with the average results obtained in private practice, one is forced to the conclusion that every diabetic, when possible, should be placed under institutional supervision until the carbohydrate tolerance can be accurately determined, and a suitable diet worked out. For the difficulties of managing these cases in their homes, are so great, that unless the physician possesses the scientific knowledge the enthusiasm and perseverance of a Pavy, his efforts will frequently fail.

Discussion

C. F. Wahrer, Fort Madison—I wish to compliment Dr. Davis on writing as good a paper as probably could any one on the theory of diabetes mellitus. But from a practical standpoint, when you have a case of diabetes mellitus under fifty years of age you are going to have a funeral sooner or later as sure as the sun rises and sets, and there is no use instituting hard and fast—and I am going to add the word **cruel**—diet lists in order to pilot that patient to his grave. I want you when writing out a diet list for a diabetic, to temper it with mercy and judgment and good sense, and not forbid the patient to eat the few things he craves; because it matters little, I say, when your patient is under fifty, and the further under fifty, the more speedy will be the funeral. And I don't want you to deny him the few things that will add to his comfort and happiness while here on earth. It is too sad a thing to get out a little diet list and give it to him and tell

him to govern himself according to that—"follow these rules and you will get well and if you don't you will die."

Theoretically we believe we know something about diabetes mellitus; but I want to tell you, every one of you, that you do not know anything about it today. We know some of the results, we know we have a hyperglycemia; yes, you have an excess of sugar in the blood, and at the same time will appear a glycosuria or sugar in the urine. And once in a while we dissect a pancreas and find that some of the islands of Langerhans are not just what they ought to be. And when you have gone that far you have got about all you know. You do not know what diabetes is. I hope that some day, in the interests of suffering humanity, some one will find out what it is, when proper prophylaxis may give us the results desired. But my plea to you today is short, but emphatic, and especially so if the patient happens to be a member of your own family. As long as it is the other man's boy or girl, or the other man's wife or brother, it does not seem to make so much difference. When it is one of your own, as it was mine, be merciful and don't give them a little diet list and cast them adrift and deny them the few good things they can enjoy. Use good common-sense, because the literature denies you what you ought to have. We do not know, and we cannot blame ourselves for not knowing what we do not know. But, for God's sake, find out what you don't know and don't practice what you don't know by what you do know, and temper your practice with mercy.

Now please do not misunderstand me. I don't want any of you to think that I think diet in diabetes without value. I only condemn rigid and cruel dieting, and all good authors uphold me in this. Experience proves that occasional carbohydrate indulgence is not only harmless, but often beneficial.

W. L. Bierring, Des Moines—The essayist has referred to the recognition of a greater number of patients with diabetes in this country. This may be largely due to the fact that we are giving more attention to the so-called mild cases of diabetes or glycosuria, and it is through the recognition of these so-called transitory glycosurias or possibly dextrinurias that better results are being obtained in this condition. I think it is well recognized that every case of diabetes is a study in itself. It requires much tact and judgment to determine whether a certain patient with diabetes will do well or not. And yet I feel that we are able to entertain a much more hopeful view of this distressing nutritional disorder than was the case some years ago. Dr. E. P. Joslin, who is perhaps one of the best informed men in this country on the subject, a few years ago at the meeting of the American Medical Association, reported a long list of diabetic patients who lived ten years or longer, and this experience was corroborated in the discussion by men who had large numbers of cases to record.

The patients were of different ages, a large proportion being among the young. The regular

orthodox diet prescribed in diabetes is not very attractive, and there is reason for the statement of the patient that he would "rather die than live according to rule."

The dangers of a rich protein diet are being recognized, so that diets of green vegetables and certain forms of carbohydrates are less likely to produce glycosuria. The special oatmeal diet of von Noorden illustrates the ability of the diabetic to take certain carbohydrates, and still have the urine remain sugar free.

Of the different diabetic foods or substitutes for bread, I feel the only ones deserving endorsement are the so-called casoid foods imported by Thomas Leeming & Company, 233 Broadway, New York City, which is strictly starch free.

The recent addition of the Allen plan of fasting until the urine is sugar and acid free, and then gradually developing a tolerance for proteins, fats, and carbohydrates, offers considerable promise in the treatment of diabetes.

The success is always dependent on the faithful co-operation of the patient, but I feel confident we can assure the diabetic patient a greater degree of comfort and much longer lease of life than was formerly the rule.

L. W. Littig, Davenport—"One swallow does not make a summer," yet occasionally it is a very interesting bird. About fifteen years ago I had under my care a boy of twelve whose urine contained so much sugar that I not only used this boy for class demonstration, but sent to his house for diabetic urine, whenever the chemical laboratory needed a specimen. One day, many years afterwards, a young fellow, six feet tall, came into my office and said, "Doctor, don't you know me?" I looked at him carefully and then said, "No, I don't know you." "Never saw me before?" he insisted. "No." "Why, I'm the boy that had all that sugar in my urine." "You that boy?" I exclaimed. "Yes, sir." "Oh, no," I said, "You can't be, that boy is dead, I know it, you are a fraud." "But," he replied, "I am that boy." I looked up his record and there was no question but that was the same boy.

Up to that moment I had felt about diabetes as Dr. Wahrer feels, but since this incident I have felt as Dr. Davis has expressed himself in regard to these cases. They are not always so hopeless.

J. F. Herrick, Ottumwa—While I have not made a special study of the condition under discussion, I have thought a great deal on the subject of metabolism, and diabetes comes under that head. I have read practically all that I could get on the subject, I have had some pretty serious cases and sad experiences. The memory of some of them makes me feel that Dr. Wahrer certainly was right, in other instances we had better results.

I think it is impossible to say beforehand that any particular case that comes to you can be cured or can be benefited, or that the next one cannot be cured or cannot be benefited, because I find some cases with large quantities of sugar in the urine that are benefited, and others that the physician cannot

do anything with—they go down seemingly the faster the more you try to do for them.

As to the fundamental cause, I am not satisfied that we have found it. I am, however, inclined to agree with the essayist that back of all these changes are the governing factors in our lives. There is some fundamental physiological fault. Just what it is I would not be prepared to say, but I do not doubt that primarily it is located in the nerve-centers at the base of the brain. As is well known, you can start a glycosuria by an injury at the base of the fourth ventricle. Whether on post-mortem the evidences of the disease are found in the pancreas, in the adrenals, or wherever it is, I feel that primarily the trouble is at the base of the brain in the basal ganglia. And that is the reason why most of our treatment is a failure, and the reason why I believe that arsenic will do more than any other one drug in lessening the quantity of sugar without regard to what the patient is eating. I do not mean by this that arsenic will stop the disease or cure it, but it will have more influence in changing the amount of sugar than any other one drug. And arsenic does seem to have greater influence on the nerve-centers and nerves themselves, than does any other drug.

And so my impression, from what I have seen and read, is that fundamentally the disease has its origin in the basal ganglia of the brain.

C. T. Maxwell, Sioux City—Without going into the theory of this subject, I would like to mention one type of case that apparently makes the sugar more easily from the proteins than from the carbohydrates. Among the few cases of the disease that I have seen, I have noticed, as I remember, three such cases. Starting out with a small quantity of carbohydrate in the diet, as you cut that down, instead of the sugar going down it goes up; on the other hand, increase the carbohydrates and decrease the proteins and the sugar goes down. And incidentally these were cases that I found did well on the von Noorden oat meal diet, which is essentially a carbohydrate diet, having a low protein content.

E. H. King, Muscatine—In regard to restriction of diet, my experience with diabetics is that while you may restrict the output of sugar by controlling the diet, you do not reach the cause of the disease. That does not cure your patient. I agree partially with Dr. Bierring and partially with Dr. Wahrer in regard to the diet.

One point in the diet that has not been mentioned, but which has worked well for the comfort of the patients under my observation, and that is grape fruit. They ate this freely and it satisfied them and did not increase the amount of sugar. I questioned these cases carefully as to the effect of eating grape fruit and how they prepared it, and they said they ate it raw and liked it. It seemed to do them good, satisfying a certain desire for carbohydrates.

C. F. Wahrer—I want to ask any one of this crowd who feels sure he has cured a diabetic, to either stand up or hold up his hand. I do not see any response.

L. W. Littig—I should ask Dr. Wahrer whether he is absolutely sure that he has ever cured a case of measles or of chicken-pox?

THE EXTRINSIC MUSCLES IN REFRACTION*

H. M. IVINS, M. D., Cedar Rapids

In consideration of the extrinsic muscles in refraction, we have to consider a disturbance of the normal balance of the extrinsic muscles of the eyes. We have to consider a tendency for the visual lines to deviate from the parallel. This condition has been termed heterophoria. Heterophoria has a tendency to produce double vision, which condition gives rise to pain in the head and eyes, due to a strain on the muscles, in an endeavor to maintain single vision.

Squint differs in that it is not a tendency, but a real deviation, and fusion does not take place. This condition we will not discuss here.

First, let us consider the power and relation of the extrinsic muscles. The power of the externi should be six to eight degrees. The power of the interni should be twenty-four to thirty-two degrees, which gives a normal relation between the lateral muscles of about one to four. The power of the superiors should be two and one-half degrees. The power of the inferiors should be two and one-half degrees, which gives the normal relation about equal. The power of the obliques should be four degrees, giving a normal relation equal. Therefore, the cause for asthenopia in eyes with a normal muscle relationship must be sought elsewhere than in the muscles.

In man we have a muscle balance to maintain which has not as yet been perfected, conditions of civilization greatly altering the normal relationship, which alteration is made manifest by pain, etc.

The relationship of the extrinsic muscles therefore is of great importance because, if the relation is in the proper proportion, there will be no asthenopia from the muscles. Thus, if the power of abduction is four and the power of adduction is sixteen to twenty, the four degrees, though low, is compensated for by the sixteen to twenty degrees of adduction, or, on the other hand, if the abduction is ten degrees and the adduction is forty to forty-eight degrees, the high degree of abduction is readily compensated for by the high degree of adduction, and makes the relationship normal. Hence, there will be no muscular asthenopia.

The nomenclature ordinarily used and accepted

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is that by Stevens. I refer to the phorias and the Maddox Rod phoria tests, and if we will keep in mind that the phorias are pure and simple tendencies towards a deviation of the visual lines, we will be able to study the subject, using the terms esophoria, exophoria, hyperphoria, etc., with intelligence because we do have tendencies towards a deviation of the visual lines, but generally speaking, we must remember that the phoria tests are not scientific, and are often purely attempts to find the relationship existing between the muscles. These tests are often used by the oculist but rarely should any attention be paid to their importance in the final prescription.

The reason for this is that we may have a muscle spasm of the extrinsic muscles as well as of the intrinsic muscles. We are all familiar with the condition in which hyperopia sometimes simulates myopia, which condition we know as accommodative spasm, and we are obliged to use atropine to paralyze the muscles of accommodation. Now, we may likewise have a muscle spasm of the extrinsic muscles. A spasm of a weak interni, in case of prolonged application of the eyes at near work, may give a condition of true exophoria which appears as an esophoria with the Maddox Rod test. This spasm of the interni is a tonic contraction of a weak muscle due to long strain, which must be broken down before the true relation can be ascertained. Therefore, in such cases our end results by Maddox Rod test would be no better, and be no more scientific than would be our end results in case of an accommodative spasm without the use of a mydriatic.

When at rest, the anatomical position of the eyes is really divergent, and the faculty of convergence is a condition which has been developed as a result of civilization, and the use of the eyes for near work.

It has been stated that 95 per cent. of all cases are hyperopic, and under the present status of civilization and close application, in these cases there is a tendency for more constant accommodation, which means a more constant ciliary stimulus, which in turn likewise creates a more constant convergent stimulus, and this is the condition that gives rise to so much of our every day asthenopia. It is our belief that if there is a tendency towards divergence, it is rather due to an insufficiency of convergence than to an excessive divergence,—divergence being the natural state, or a function rather than a faculty. Thus in every case of asthenopia we must keep in mind that there may be an extrinsic muscle spasm, a spasm of convergence, as well as a spasm of accommodation. The spasm of convergence often

being cared for by proper refraction, the same as spasm of accommodation may be treated by refraction.

The condition existing as a disturbance of the vertical equilibrium aggravates, and is usually due to lateral deviations.

The principal symptoms are deep-seated pain in eyes, and headaches, the headaches being temporal, or may extend from the eyes to the base of the brain. Confused vision, with nausea and vomiting, are symptoms less often met with, and restlessness and nervous exhaustion with general systemic conditions are found in certain types.

There are two general classes of patients in particular. First, the patient enters complaining of listlessness, no ambition, cannot read, sew, or use their eyes for any length of time because of constant pain, possibly more in eyes than head. The error of refraction need not be large. The patient has more or less systemic trouble.

In the second general class the patient enters complaining of constant headache, constant pain in the eyes, vision is usually above normal. Patient has been using the eyes at close work constantly. No apparent systemic trouble. With generally a large hyperopic correction.

The first class presents weak adductors. The patient has been trying for a long time to maintain single vision with a pair of weak interni. The error of refraction may have been corrected without giving relief. The result is the interni become very sore and painful. If this patient is a myope there is little or no stimulation of the ciliary apparatus, so if we correct the myopia we stimulate the third cranial nerves with minus lenses, and thus stimulate the muscles of convergence. This is the simpler form, and the one that responds readily to refraction. If, however, the case is one of high degree myopia, and a very near point of accommodation, a large minus correction over-stimulates an already stimulated third nerve, and we must in these cases rather under-correct and develop the externi by prism exercises.

In the case of hyperopia, with exophoria or a tendency to deviate out, complete correction of the error would inhibit the action of the third cranial nerve, and thus aggravate the already painful condition. Here as little of the plus should be put on as possible, and development of the interni encouraged by prism exercises, or finger exercises.

In the second class the condition is one of excessive convergence, the interni being so powerful for some cause or other, that compensation is maintained by the externi, only at so great a nerve strain that exhaustion must of necessity follow.

Generally these cases are hyperopic of a high degree, and the constant ciliary strain creates a constant stimulus to the third pair of cranial nerves, giving an exaggerated convergence, and makes the externi very sore and painful in their endeavor to overcome an over-stimulated interni and maintain single vision. Our endeavor here must be to inhibit the action of the third.

We should bear in mind that plus and minus lenses have their therapeutic value as depressors and stimulants to the third cranial nerves, and therefore act directly upon accommodation and convergence. We likewise know that all lenses are a combination of prisms with their bases either in or out according as they are plus or minus lenses. The base of a prism acts as a sedative to the muscle over which it rests, while the apex acts as a stimulant. Therefore, whenever we apply a plus or a minus lens it has its effect upon the ciliaries and indirectly upon convergence. In the first case we had weak interni, with a tendency to divergence and binocular vision because the relationship between the externi and interni was not normal. And, as we have stated, if the case is myopic and accommodation is normal, a full correction of the myopia will have a tendency to stimulate the weak interni and relieve the pain. If accommodation is excessive, then any stimulation of the ciliaries would make the asthenopia worse, and we must under-correct, and develop the externi by prism exercise.

In the second case we have a tendency to excessive convergence, and our treatment must be directed along a line which will inhibit the action of the third pair of cranial nerves, which is done by placing a sedative, such as plus lenses, over the ciliaries. This, in turn, adds a sedative to convergence and relieves the excessive strain on the externi. We often find it hard to induce our patients to wear constantly lenses that reduce their acuity of vision for distance. They do not experience such trouble for near work and do not object so much to them at close work, and if they will stick to the lenses they are sure to obtain relief. Where it is a matter of developing a muscle either interni, externi, or vertical, prism exercises are very helpful, and I have received excellent results by incorporating prisms, base up or down, in vertical muscle disturbance, in the regular perscription.

When a hyperopic patient is orthophoric, or exophoric, the lenses may be decentered in as far as possible.

Discussion

G. F. Harkness, Davenport—I am very glad of the opportunity to say a few words in discussing Dr Ivins admirable paper, first because it concerns a

subject which has to do with our daily routine work, and essayists are prone to devote too much time in our meetings to the unusual and rarer incidents of our practice. Secondly this is a subject that is so mixed up with associated cerebral centers, some known and some guessed at, and so intimately associated with the psychic element in the patient, that I doubt if any of us have in our own practice a working method which is entirely satisfactory. I know I have not. Some of our medical confreres report remarkable results which the rest of us do not obtain. It is so easy to demonstrate a deviation to the patient, and a disregard of the psychic element, and general condition of the patient has opened a field that is being taken advantage of by many opticians. The importance of a heptrophoria is absolutely dependent upon the trouble that it causes. No trouble, no treatment. Heterophorias are essentially motor anomalies, and we cannot say whether due to lack of innervation or muscular insufficiency. We must also remember that the movement of the eye in any one direction is not brought about by the action of any one muscle. Psuedo-heterophorias are realities, and may show with the tests available, and yet be of no consequence as regards the visual economy.

First comes the correction of the refractive error with particular attention being paid to the correction of all astigmatism present. The essayist has called attention to the association of accommodation and its influence upon the lateral heterophorias. I do not believe that with the first correction of a heterophoria that may be present should have much influence as regards the strength of lens prescribed. The ordinary refractive correction may be all sufficient. It is important, however, to make a record of the muscle imbalance present before the refractive correction has been worn, for if the patient does not gain the desired relief, this record will be of material aid when compared with subsequent records. Marked vertical deviations may form an exception to this rule, and the prism correction for the same be incorporated in the refractive correction. The permanent need for the same, however, may not continue. I recall a case that wore with comfort a vertical prism correction of 7°. There was no diplopia, but the need for same later disappeared with the proper refractive correction, and a regulation of diet.

Secondly, if the refractive correction is not sufficient the hyperphoria should have a prism correction. I myself have unfortunately not been able to obtain results in muscle exercises to correct the vertical deviations or the cyclophorias as advocated particularly by Savage. The general condition should be particularly investigated. Our honored guest at this meeting has called attention to the good results obtained from increasing doses of nuxvomica in extra-ocular insufficiencies. With the lateral deviations, gratifying results may be obtained as the essayist has pointed out.

With esophoria with hyperopia, complete correction, esophoris with myopia reduced correction. As

regards the full correction of hyperopia, let not the subjective test under atropine but rather the retinoscopic test, govern the prescription. Atropine is often incomplete as a cycloplegic. Exophoria with hyperopia, reduce the correction. Exophoria with myopia err on the side of over correction.

Thirdly, as regards the use of prism exercises. An interpretation of the lateral deviations means nothing, except when considered both in distant and near vision, that is, when including the phenomena of ocular convergence. This is particularly shown in that an exophoria seldom gives rise to symptoms except when associated with a defect of dynamic convergence. Dane's outline of the convergence and divergence excesses and insufficiencies forms an admirable basis from which to start convergence excess—esophoria less in distance. Prism, divergence not low; prism, convergence normal; near point excessively close.

Divergence Insufficiency—Esophoria for distance greater. Prism, divergence low; prism, convergence low or normal; may even be exophoria at near point.

Convergence Insufficiency—Orthophoria or slight exophoria in distance. Prism, divergence not excessive; prism, convergence low; exophoria marked at near point; near point less than three inches.

Divergence Excess—Exophoria marked for distance. Prism divergence high; prism convergence normal or slightly lowered; near point normal.

While we may have one of the above conditions in the beginning, the conditions become intermixed as time elapses. Even if no deficiency of convergence, prism exercises at times give temporary relief, be it due to the muscles gaining a more ready response to visual needs or be it psychic. Overaction of the external muscles is rare, exophoria is generally due to an under action of the internals. An exophoria in distance and remaining the same or becoming less at close range, is not due to an insufficiency of convergence.

Our best results as regards prism exercise, is to be obtained in convergence insufficiency, and it is to be remembered that this may be brought about by the refractive correction alone.

For increasing the converging power, the pencil point exercise, and the bar reading are the easiest for the patient, and if used persistently, effective, but I have found that their ease of application have been the means of the patients neglecting the use of the same. They seem to think more of the necessity of doing something if provided with prisms. It is of importance that the prism exercises be carried out at the reading distance as well as in the distance.

In convergence excess the prism exercises are less satisfactory and of practically no use if used only in distant vision. They must be used at close range.

Fourth, the prescribing of the prisms for lateral deviations has, generally speaking, met with no success. Occasionally an esophoria due to a divergence insufficiency, will apparently gain some relief from prisms worn base out, the strength of prism being equal to the deficiency of divergence, and with no

regard to the amount of esophoria. The general opinion seems to be that little is to be gained from wearing prisms base in an exophoria, yet I have seen a few cases where there was no deficiency of convergence present where the wearing of such prisms of small degree made the patient very happy. Perhaps it was psychic.

As is well known, we can gain a prism effect by the decentering of lenses but it is well to remember that resulting glass can not be the same as when the lense retains its proper position, and has a prism added to it.

Dr. Ivins, Cedar Rapids—In closing I have really nothing further to add to what has already been brought out. We must not forget that we can not always assume that muscle imbalance is going to be cleared up wholly by correction of the refractive error alone.

INDUCED ABORTION*

C. E. DAKIN, M. D., Mason City

"It is said that almost one-half of the child-bearing women have a miscarriage before the thirty-fifth year."

DeLee says, "Twenty-four per cent. of his patients give a history of abortion."

Reading these statements caused me to look over my own records, and I find that during fifteen years of fairly extensive general practice the number of abortions was about 25 per cent. of the number of normal labors. Statistics of this condition are very inaccurate, as it is so difficult to get adequate histories from the patient, and many early cases never come into a physician's hands.

The causes of abortion are many, classed as fetal, maternal, parental and induced. Authors give a long list of diseased conditions which may interrupt pregnancy, and I have encountered many of them, but a perusal of my case records shows that in 90 per cent. of the cases I at least suspected induced labor, so-called illegitimate or criminal abortion. This proportion of deliberately inflicted illness seems large, and to it we shall give our attention.

Causes of illegitimate abortion may be classed as financial, social, and the fear of bearing illegitimate children. City practitioners testify that the largest percentage of induced labors occur among the wealthy devotees of society. It is not unknown in Iowa, that a woman will deliberately murder her unborn babe rather than deny herself her accustomed pleasures, but happily it is a rare condition. Children are fashionable here, possibly because the majority of our people belong to the great middle class of fairly

*Read before the Austin Flint-Cedar Valley Medical Society, July 14, 1915.

well to do, who still cling to the old fashioned virtues, including the love of home and children. However we rarely see the old fashioned family of twelve or fifteen children. Our standard of living is so much higher even for the poorest laborer that each added child means falling farther back from the level of his neighbors, denying themselves what seem the merest necessities nowadays, that each newcomer may be clothed and fed. Is it any wonder that each wife breathes a sigh of relief at the appearance of her monthly flow, and that she pesters her physician for a certain remedy?

Illegitimacy, we have had, always with us, with its resulting social ostracism for the mother. Again our increased cost of living, which is rapidly forcing up the average age at marriage, will surely raise the number of illegitimates and the number of induced abortions, with their accompanying misery, disease, and death.

I find among all these women, ignorance of the dangers to which they have exposed themselves, and usually indifference to any legal or moral aspect of the matter. They will not consider their act murder, or at the most render a verdict of justifiable homicide. Here is a condition causing the death or disability of hundreds of women, which casts as much of a reflection upon the economic common sense of the community as endemic typhoid or smallpox or any other preventable disease.

The reason behind this condition is a widespread belief that each woman should have the right to choose whether she shall become a mother and when: a theorem which to me seems almost axiomatic, but which the law of this country does not recognize. How many of you realize that when the hard working mother of a dozen children begs you to advise her how to prevent the advent of another, the federal prison stares you in the face if you answer? A surgeon is lauded to the skies when he saves the life of a woman with a contracted pelvis with Cesarean section, but is absolutely forbidden to counsel her how to avoid this terrible trap again.

The archaic reasoning of the law confounds prevention of conception with abortion. Apparently sees no distinction between murder of a living being, and the prevention of the union of the ovum and spermatozoa which is necessary for its formation. How much better it would be to substitute for infant murder with its sequels of infection and chronic invalidism, sterility, and even death, the instruction of women in simple, safe procedures of prophylaxis. The methods commonly used are more or less dangerous to the users, being handed from one to another, or

based upon the veiled advertising of certain proprietaries, that are certainly neither simple nor safe. Isn't it time that this legal bar should be removed, and the family physician be permitted without fear to give legally, scientific instructions, which will preserve the health and happiness of his patients.

The methods of attempting to induce abortion are many. Our newspapers are defiled with advertisements of emmenagogues, which do not work, and are admittedly made only to sell, and to lead the sufferers into the hands of the professional abortionist. As far as I have known their only effect is to poison the patient with aloes, turpentine, and other drugs, adding so much to the toll of illness. Many women are quite expert in passing a catheter, knitting needle, or crotchet hook into the uterine cavity, doing it repeatedly until labor is induced. I think that this is the most common method used, and accounts for the frequency of infection. It is difficult to get a confession from most of these patients, but where there is a strong suspicion of interference having produced the abortion, we should regard the patient as being infected.

The mechanism of abortion may be studied in several stages, threatened, inevitable or progressive, incomplete, and missed abortion being a common division.

Threatened abortion is not always easily diagnosed, but the history of passing a period or so, the onset of irregular pains and slight bleeding is very suggestive. The uterus is contracting and hard, the cervix may soften considerably and even dilate a little. Be sure to eliminate extra uterine pregnancy before deciding upon a course of treatment. Rest in bed with an opiate to quiet the pains will often tide the patient over. An ice bag is helpful but I have received no benefit from any other remedies.

These patients need careful watching as alarming hemorrhage may occur at any time, calling for immediate intervention.

As typical of this stage, I will mention: Miss A., seventeen, unmarried, in a pitiable mental state, from the hands of a friendly married woman received two teaspoonfuls of fluid extract of ergot, two tablespoonfuls of turpentine and some pennyroyal pills, all in one day. Severe vomiting beginning, she ran to the back door and fell into an open cellarway, and was picked up unconscious. Was seen an hour later, and found to be vomiting frequently, frequent watery stools, irregular uterine contractions, and exhibited many bruised spots including a large one on the side of the abdomen. Rest in bed with morphine hypodermically relieved the situation, except for suppression of urine, which yielded to repeated saline enemas. Patient in good

condition after three days. Further history unknown.

Another case applicable here, recalls the need of careful diagnosis.

Mrs. J. twenty-eight; married six years, had her last normal menstruation three months ago. At periods there has appeared considerable vaginal discharge but no blood. Is now flowing slightly with cramping pains. Abdomen has enlarged noticeably in the last few months, is tympanitic except over lower part. She is so nervous and finical that an attempted vaginal examination revealed nothing but a bad disposition. Rest and expectant treatment resulted in increase of symptoms. Hemorrhage was free but not alarming. Pain being very poorly endured, we at last administered ether intending to pack the uterus if it seemed necessary. When thoroughly relaxed from the anesthetic the abdomen was flat and bimanual examination revealed a small retroverted uterus, apparently empty, and with normal adnexa. There seeming to be no especial treatment needed for a normal menstrual period, we allowed the patient to wake up in peace. I might say that several years later I was called to attend this same woman under similar conditions, having missed six periods, and looking to be six or seven months along. Remembering my former experience, I insisted upon an examination, which was made satisfactorily only after an anesthetic was given, and found again that there was no pelvic abnormality. Her large abdomen did not return with her consciousness and one of her neighbors profited by a very complete outfit of baby clothes.

If, in spite of treatment, the symptoms increase, we reach the stage of inevitable abortion. Hemorrhage is more marked; pains become stronger and more regular. The cervix softens and relaxes from above downward. If the mass is expelled entire, pains and bleeding usually cease. If the membranes rupture, the fetus escaping, and the decidua retained, pains and bleeding are more or less persistent. Here is where careful watching and expert judgment are necessary. Profuse hemorrhage, fever from absorption of decomposing remnants, or evident infection call for interference; emptying of the uterine cavity. Sometimes the process stops for a time with the expulsion of the fetus, there being neither pain, bleeding nor fever, so called incomplete abortion, to be distinguished from missed abortion where a dead ovum is retained intact.

The following cases will illustrate these conditions and varying treatment.

Mrs. B. twenty-four, married one year. Stenographer supporting a husband. Pregnancy in spite of following the almanac, and the advice of several bosom friends, threatened her ability as a wage earner, and in co-operation with a neighbor who knew how, she passed a rubber catheter into the uterine cavity daily for four days before pain and

hemorrhage intervened. Did not call a doctor until alarmed by the amount of bleeding. A three months fetus with considerable clotted blood lay in the bed. Vagina filled with clot. Fundus doughy and large, responded to massage, and bleeding practically ceased. Removed to the hospital and watched closely for twelve hours when the onset of pain and slight bleeding preceded the extrusion of the decidua. Convalescence followed without incident.

Miss C., unmarried. Hard working maid with an admiring barber frequently in attendance heretofore, at present exhibiting more discretion. Has been flowing three days with much pain at intervals. Purulent vaginal discharge. Inguinal glands enlarged and tender. T.104.6 P.120 R.30. The cervix was deeply ulcerated and also several deep ulcers, chancroidal in appearance in the vagina. Under ether a decomposing mass of decidua was removed with the finger, and the ulcers cauterized with carbolic acid. Uterus wiped out with carbolic acid and tr iodine equal parts. Temperature reached normal in twelve hours and convalescence was rapid. Ulcers healed after a second cauterization.

Mrs. D. forty, married and the mother of eight children. When eight weeks passed without menstruation, she called on a doctor recommended by a friend. He, for five dollars in hand duly paid, introduced an intrauterine electrode and turned on a current, variety and strength unknown, to patient, for ten minutes. No effect was noticed for several weeks except feeling of illness when there began a slight evil smelling discharge, which had lasted five weeks when I first saw her. She was weak and pale; uterus enlarged and soft; cervix admitted one finger; discharge very offensive. Had never had any expulsive pains. Under ether a shriveled dead ovum removed with difficulty, it being tightly adherent. Convalescence slow, a chronic endometritis remaining.

E., eighteen, unmarried. After missing her period twice her mother took her to a woman who professes skill in such cases. A catheter was introduced and a small amount of flow was noticed. After forty-eight hours, hemorrhage was severe and pains regular and in the course of a few hours fetus and decidua were extruded. Bleeding and pain ceased, but after a chill the temperature rose, and severe abdominal pains frightened the family into calling a doctor. The cervix was open and the uterus soft and relaxed. A careful exploration of the uterine cavity revealed nothing but a slight sero-purulent discharge. The uterus was fixed, and there was great swelling and tenderness on either side. A blood culture was taken showing streptococcus septicemia, the patient surviving but forty-eight hours longer.

This case is typical of a large number, some of whom have survived after a severe fight with sepsis. A few cases of this type were curetted, promptly becoming worse from destruction of the protective wall built up about the infected cavity by the leucocytes. A sharp curette has no business in an infected uterus. Get sufficient

dilatation to introduce a finger and forceps and remove the decidua in this way. I use frequently a ring curette an inch in diameter which catches fragments against my finger and does not damage the uterine wall. Recent experience has led me to think that some of these patients might be saved by early laparotomy, with excision or drainage of infected points.

Mrs. F., twenty-two; married a few months; three months pregnant. Vaginal discharge of blood with some pain for one week. Chills and fever four days. No further history obtainable. Called physician who discovered clots and membranes in the vagina by digital examination, and decided on curettement. Under ether what had felt to the examining finger like fetal membranes protruding from the cervix, proved to be a coil of intestine. Patient was immediately sent to the hospital and referred to me for operation. There was some shock. Pain in the back was severe. Pulse weak but regular. Nausea but no vomiting. T.104. P.110. A loop of small intestine protruded from the cervix, slipping down easily from a large relaxed uterus. About two feet of it came into my hand with a slight pull, the mesentery being detached. It was black and friable. The abdomen was rigid and very tender in the lower part.

Under ether a median incision was made revealing widespread pelvic inflammation. The cecum with an inflamed appendix lay deep in the cul de sac, held by slight adhesions to the uterus and omentum. Right tube and ovary badly inflamed and adherent to the uterus, and cecum. When adhesions were separated the ileum was found to run directly from the ileo-cecal valve into a hole in the posterior surface of the uterus. It was clamped and cut and the stump pulled through into the vagina. The uterus was swollen and soft with a nodular feeling and the infection so severe that it was decided to remove it.

A supravaginal hysterectomy was done, including in the mass, the right ovary and tube and most of the right broad ligament. The other ovary and tube were left and used to cover in the stump of the cervix. The appendix was resected, and its stump and that of the ileum were turned into the end of the cecum and buried. As the end of the small bowel needed considerable traction to approximate it to the cecum, it was anastomosed to the sigmoid, using the Lane method. I like this way as it institutes immediate and complete drainage of the bowel, and prevents overdilatation and straining on the suture line, lessening the danger of leakage. On account of the extensive infection a drain was carried to the cul de sac from the lower angle of the wound. Shock was marked after the operation, and convalescence slow. The patient was out in four weeks and three weeks later an abscess opened in the old drainage place and discharged several ounces of pus, but healed shortly without other incident. Patient seems in good health at present.

Examination of the tissues removed showed acute pyosalpinx, acute appendicitis with tip of the ap-

pendix filled with pus. Uterus filled with soft decomposing mass of decidua. Small abscesses in the uterine wall showed that an attempt at saving the uterus would have resulted fatally. This leads me to think that many more infected cases might be saved by early radical surgery.

Resume—

1. Watchful waiting works better here than in international complications.

2. Get as good a history as possible for your own protection and regard all suspicious cases as infected until proven otherwise.

3. Treatment. *Threatened abortion*—Rest in bed. Opiates. Ice bag.

Progressing abortion—Hemorrhage without dilatation. Tampon until dilatation is sufficient, and then empty the uterus with finger and forceps and ring curette. Avoid ordinary sharp curette, spiral curettes, etc., and do not forcibly dilate the cervix if it can be avoided.

If fever and hemorrhage are persistent empty the uterus or be sure that it is empty and then let it alone. Any curetting or douching injures the protective wall which bars the infection from the general system.

Hysterectomy is probably safer than curettement in septic metritis. General treatment of infection is always indicated. But all this we are doing "after the horse is stolen." Prophylaxis is the dominant spirit of modern treatment. Let our women be educated in safe prevention of conception and infanticide with its accompanying physical and mental deterioration must inevitably decrease. I have no fear that this publicity will destroy our birth rate. It has not done so in the countries in which it has been tried, and I refuse to concede that their people have any more parental love than ours. The majority of our women desire to have children, and will do so all the more willingly when they can select the time and place. Those whose production is prevented will not be missed as in their place will arise a race conceived in love, educated without the restriction of poverty, who will raise our country to even a higher plane than she now occupies in the Congress of Nations.

GANGRENE OF THE APPENDIX*

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In the consideration of gangrene of the appendix, the chief center of interest hinges upon the etiological factors which may be divided as (a) predisposing and (b) activating factors.

A. The predisposing group of factors may be further subdivided into:

*Read before the Botna Valley Medical Society, August 17, 1915.

1. The anatomical structure of the appendix and

2. Pathological changes caused by previous attacks of appendicitis.

1. There are several interesting features in the structure of the appendix. Being attached to the most dependent part of the cecum, it is richly supplied with blood vessels. The veins which empty into the portal system are the most dependent vessels of this system, with the exception of the sigmoid and hemorrhoidal veins. They are of large calibre, comparatively speaking, with very thin walls, so that they become engorged or may be compressed upon slight provocation.

The main vessels enter and leave the wall of the appendix through the hiatus muscularis, which are described by Lockwood as being gaps in the muscular wall which allow the sub-mucosa and sub-peritoneal tissues to come in direct contact. The vessels form a plexus in the tissue of the sub-mucosa and send terminal branches into the mucosa which is richly supplied with blood.

Through the hiatus muscularis, the lymphatic vessels also pass from the appendix to the meso-appendix, the lymph sinuses arising in the mucosa. The appendix is rich in lymphoid tissue, especially in the proximal third. Near the junction of the appendix with the cecum, the lymphoid tissue frequently causes a protrusion of the mucosa, which as Gerlach has shown, may act as a valve causing an obstruction of the lumen and producing retention of the contents. The amount of connective tissue in the wall of the appendix is relatively small, consequently the elasticity is limited. This fact is of importance when considering the increased tension which may be produced by inflammatory changes.

The meso-appendix varies in its relations to the appendix, occasionally being entirely absent. On the other hand it may extend to the tip. In a majority of cases, however, the meso-appendix is attached to the proximal two-thirds of the appendix, leaving the distal third completely invested by peritoneum. It is the distal third which is most susceptible to gangrene. When the meso-appendix is absent, there is greater liability of the appendix becoming angulated and adherent to the adjacent viscera.

2. The pathological changes of importance with respect to the etiological factors, are produced by mild or moderately severe attacks of appendicitis. Probably no true inflammation of the appendix occurs without leaving its macro— or microscopical effect. In the mucosa a small area of cells may be destroyed with a small scar resultant, or scar tissue may surround the entire

lumen causing a stricture. This scar tissue is more ischemic than the surrounding tissue and partially obstructs the circulation. Peri-appendicular inflammation may cause adhesions which upon contracting produce angulation or flexions of the appendix in whole or in part. With any of the aforesaid conditions there is an interference with the normal circulatory balance which predisposes to gangrene.

Gangrene is a mortification or death of a part of the body from failure in nutrition. The activating factors of gangrene may be divided into two classes:

1. Mechanical and
2. Bacterial.

These two factors are intimately associated, and it is questionable whether they ever produce gangrene separately.

1. Mechanically a twist of the appendix, obstruction of the lumen by catarrhal swelling of the mucosa or the valve of Gerlach, by enteroliths or foreign bodies, produce first a congestion of the appendix in whole or in part. This congestion, which causes pressure on the veins at some point of constriction as the hiatus muscularis or in the region of a stricture, is followed by edema of the tissues which favors bacterial invasion. This is followed by a thrombo-phlebitis which rapidly occludes the veins, producing circulatory stasis, and it is only a short time until a thrombo-arteritis occurs which completely blocks the circulation.

2. It is well known that the bacteria of the intestinal tract acquire increased activity and virulence when confined in an occluded portion of the bowel, this being especially true of the colon bacillus, the most pathogenic bacteria of the intestinal tract. Whether or not there is a specific necrogenic bacterium which is responsible for the gangrene, has not been conclusively shown, though Malcolm has suggested the possibility of such an organism "which causes no inflammation until the dead part is separating or has separated."

Under the aforesaid circumstances, with occlusion of the lumen and congestion of the appendix, it is only a short time until the involved area is infected by a virulent organism. If the process be rapid and the circulatory and lymphatic systems become blocked early, there will be little or no absorption of the toxins during the first thirty-six hours, and it is this fact which is most deceptive and often results in an error in diagnosis.

Symptomatology

There is no chain of symptoms which is absolutely pathognomonic of gangrenous appendi-

citis. However certain signs and symptoms are strongly suggestive. If gangrene is the result of a progressive change in the appendix, the disease starts with the typical picture of acute appendicitis.

Temperature is unreliable as a diagnostic aid to the pathological condition. Murphy claims that in all cases of gangrenous appendicitis the temperature is above normal at some time during the first thirty-six hours. In all cases of acute appendicitis a sudden drop in the temperature is indicative of a serious complication, and occurs frequently in beginning gangrene. In the fulminating type the temperature may be normal or subnormal when the patient is first examined. This can be explained by the assumption that the process is so rapid that the venous and lymphatic systems are occluded or blocked before absorption takes place. In these cases I believe that obstruction is primarily mechanical and that the thrombo-phlebitis is a secondary involvement.

The pulse likewise depends upon the amount of absorption. In the progressive cases it is usually rapid, but may return to normal with the development of gangrene. In the fulminating cases there is usually no departure from the normal until the late stages. It does not show the characteristic qualities of peritonitis until late in the disease or unless complicated by an abscess formation.

Vomiting is usually present with initial colic, and as Ochsner has shown, a continuation of vomiting is indicative of congestion at the ileocecal valve. A continued and uncontrollable vomiting suggests a bad prognosis. In the majority of cases constipation is the rule as shown by Deaver. However, diarrhea is not uncommon, and when present increases the gravity of the prognosis.

Pain is usually the chief symptom at the onset, being extremely severe. There are two types of pain. The spasmodic colic which is more or less intermittent and very severe, and a dull ache which persists between the attacks of colic. The intensity of the pain is caused by the inelasticity of the wall of the appendix plus the increased tension.

As soon as the appendix becomes gangrenous the pain ceases because the nerve fibres are necrotic and do not respond to stimuli. Hence a cessation of pain in acute appendicitis is not always indicative of a favorable termination.

The most characteristic sign of gangrenous appendicitis is the exquisite tenderness of the area overlying the affected appendix which is almost as sensitive as a well developed furuncle.

The slightest touch will elicit pain, and when present, in the absence of other signs or with slight increase of temperature, is strongly suggestive of a gangrenous appendix. When the appendix occupies the retro-cecal position, the tenderness can usually be located in the right lumbar region between the ribs and the crest of the ileum. This location of tenderness is frequently confused with kidney or ureteral disease, which in the majority of cases can be eliminated from consideration by a careful microscopical examination of the urine. One should not forget the possibility of retro-cecal appendicitis with tenderness in lumbar region.

Conclusion:

1. Gangrenous appendicitis often occurs in patients who have had preceding minor attacks of appendicitis so that the possibility of a gangrenous appendix should always be considered in every case of recurrent appendicitis.

2. The transition from a catarrhal to a gangrenous condition is usually manifested by an amelioration of symptoms.

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RAYNAUD'S DISEASE

The theory of Raynaud's disease has been much discussed, and while there has been a general acceptance of the views of Raynaud himself that the disease is a central vasomotor neurosis, due to direct or reflex stimuli on the vasomotor center, others would add certain details as a peripheral neuritis or a vascular spasm caused by a syphilitic peripheral neuritis or a central vasomotor disturbance as a primary feature and a secondary endarteritis from prolonged vasoconstriction or a primary leucic endarteritis. In this connection Dr. Hans Lissner of the University of California in Archives of Internal Medicine, October, 1915, states that Raynaud's symptom complex has been observed as a complication in some fifty different diseases, including acute and chronic infectious diseases, mental and nervous diseases, disorders of the circulatory system, ductless glands, etc. In this paper Dr. Lissner brings forward especially the relationship to syphilis, and shows that probably 10 per cent. of the cases occur in syphilitics. Lissner is not prepared to say that this proportion is excessive, but suggests certain possibilities worth considering.

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ABOUT SEVERAL THINGS

It will be remembered that the Iowa Legislature at its last session passed an act providing for the sending of crippled children or those needing orthopedic treatment, to the University Hospital for care and such surgical treatment as might be necessary. This was a very commendable piece of legislation, and there was reason to hope much from it.

It appears now that the Homeopathic Department, which has two junior students and about six sophomores and freshmen, have applied to one of the district judges in Des Moines to order certain cases to be committed to the Homeopathic Hospital for treatment. When the bill for this service was referred to the State Executive Council, they refused to allow it on the ground that the provision for the care of these cases was limited to the University Hospital.

What will come out of this difficulty we do not know. It only emphasizes what we have said before, that the maintenance of full time professor of surgery for two students in the clinical course, is not the most economical thing for the State University, and why the chairs of surgery should be duplicated, we are unable to understand.

We have received a "Foreword" that Senator Allen of Pocahontas is to be made Governor of the State of Iowa. It appears that Mr. Allen's chief claim to consideration is his antagonism to various business interests, particularly transportation interests and all that kind of thing. He is also a particular champion of the down trodden

farmer who receives so small a share of the benefits of prosperity.

There is a reason why the medical profession should in particular consider Senator Allen. It lies in the fact that he has been a consistent supporter of every irregular system of medicine that has come before the Legislature for support and encouragement. Senator Allen was a strong supporter of the chiropractic bill that was before the Legislature at the last session. Years ago he was the champion of the osteopaths, and succeeded in placing upon them a standard so low that it was distasteful and embarrassing to the osteopaths themselves. In the Thirty-sixth General Assembly he was the champion of the mechanical therapeutics bill which was fostered by the local osteopathic school that fell into commercial hands and was trying to secure some legislation which would make the institution at least a temporary financial asset.

There is a group of Iowa statesmen who have been elected to the state senate, such for instance as Doarn of Boone, Quigley of McGregor and Grout of Waterloo, that especially need the watchful eye of the medical profession. These men in the face of scientific progress of the twentieth century, place themselves in the attitude of statesmen of the seventeenth century. It is probable that in their minds, incantation and the methods practiced by the Indian medicine man and by the medicine man of central Africa, would serve better in the promotion of public welfare and public health, than the destruction of the mosquito and the fly, and watchfulness of water supply, etc., would be at the present day.

We cannot help feeling that with a decreasing population in the state of Iowa, that a liberal policy towards business industries would serve better than the reverse, and we cannot avoid feeling that the "Foreword" which has been issued by the friends of Senator Allen, should arouse a feeling of anxiety on the part of the business interests of the state. We have suffered enough already from the gentlemen who would bring bitterness and antagonism between the various interests that serve the state, when it is done apparently for the purpose of securing votes.

There is an excellent opportunity for the display of liberal minded sentiment on the part of the medical profession towards the fostering of vicious antiquated methods of practice. It is just as important to the medical man to place his face squarely against that kind of legislation as it would be to place his face against the plagues of cancer, tuberculosis and syphilis. They all work in the same way to undermine a healthy and

vigorous public sentiment and progressive welfare movements.

In the last issue of the State Board of Health, a special bulletin is published of registered nurses in Iowa. We find graduates from some sixty-four different Iowa hospitals, offering their services to the public, and we are glad to say that today most of these hospitals are in position to adequately train nurses for general service, but we feel that the graduates of the smaller hospitals and of the state insane hospitals, should receive a certain amount of post-graduate training in some of our larger institutions to familiarize them with the duties of nurses in the care of certain classes of patients. We feel furthermore that the spirit which leads small hospitals to establish training schools, chiefly for the purpose of securing cheap maids of all work, is wrong, and that such hospitals should instead of maintaining training schools, hire trained nurses. There is just as serious objection to placing the graduates of poorly equipped hospitals on the list of registered nurses, as there is of placing the graduates of purely commercial medical schools on the list of qualified physicians and surgeons. The imposition on the public is the same in both instances. If the state board is to place its approval on imperfectly qualified physicians, and likewise on imperfectly qualified nurses, it would be in the interest of public welfare that all such legislation should be abolished, and let every doctor and every nurse stand on their own merits without the fostering influence of the state.

Referring to the bulletin itself, it is to be commended for the useful things it contains, and particularly for the cuts referring to a model county hospital. It is our opinion that the hospitals of the future in states like Iowa where the cities are comparatively small, will be on the county hospital plan. It may be that well inclined and liberal minded persons may furnish the money for the building of the hospital, and perhaps for the endowment of the institution, but nevertheless it will, of necessity, be on the county hospital plan. We have often remarked that a hospital that finds itself obliged to beg from day to day to live, is not the ideal hospital, and there are many chances that for commercial reasons improper work will be carried on in these institutions. The county hospital is one which is built either through private munificences or public taxation, and supported by taxation on the basis of furnishing the minimum cost of service, so that the hospital may be open to all persons that need hospital care, regardless of the fact of whether they can pay the real cost of their maintenance or not. This will

become in the near future, an economic necessity, and will be in line with the present ideas of legislation regarding industrial service.

We would recommend a careful reading of the bulletin already referred to, by all those interested in hospital and nurse service, with a special thoughtful study of the cuts that refer to the model hospital; the group of nurses, for instance, the library and study room, demonstration-diet kitchen, operating room, wards, etc. All these indicate that the nurse in training is relieved of the necessity of catching a spare moment now and then between scrubbing and sweeping, to do a little reading.

The bulletin furnishes much valuable information in the matter of infectious diseases, and it gives a complete list of graduate nurses in Iowa, giving the place of graduation and the city in which the hospital is located.

We do not know where the following interesting incident occurred; but have the word of John J. A. O'Reiley of the New York bar; lecturer in legal medicine at the Brooklyn law school, for the truth of it.

"Perhaps the most glaring exhibition of indifference to scientific unity and lack of common sense was in the case of a medical interne who was sued for breach of promise of marriage by an adventuress, who also brought proceedings to vacate the young doctor's diploma. This was not before a jury of laymen, but a commission of three grave and reverend doctors of medicine who represented the licensing power of the state. The woman had had a double oophorectomy and salpingectomy and curettage, as well as ventral fixation of the uterus, and implantation of a small section of the ovary in the soft tissues. These operations were all done on the first of January, and the proceedings were based on the allegation that on the first of April next following, this doctor had betrayed her; that on April 5th (four days later) a menstrual period was due, and failing to arrive, the young doctor recommended hot hip baths, some compound cathartic pills and some fluid medicine which was claimed to be ergot, whereupon the woman was supposed to have aborted and because of the young doctor's alleged unethical activity the complainant 'prayed, etc., that his diploma be vacated.' When I analyzed the case for the young doctor and his counsel and discovered the absurdity of the situation I thought to save the woman's counsel embarrassment by suggesting a conference with his medical adviser on the merits of the case, but he went to trial and in the face of the hospital record, properly identified and interpreted, which demonstrated that a hopeless sterility existed after the operation, the learned medical judges took the view that the series of operations described could not be performed on any one person at any one time and would have recommended

a forfeiture of the license but for the warning that their action would be reviewed on a writ of certiorari which stimulated them to search for scientific unity, blend it with common sense, and realize not only the absurdity of the woman's contention of fertility but the improbability of even an ordinary medical student expecting to consummate an abortion in the time limit specified in this case."

Our readers will recall the fact that a few weeks ago there appeared in the Chicago papers a decision of the Supreme Court of the state of Illinois in regard to the American Medical Association. On reading this newspaper item, one would naturally come to the conclusion that the courts had declared the A. M. A. to be out of business, but the facts are that the A. M. A. has never been before the courts of Illinois, and nothing has been decided in regard to the present status of the association. The suit was brought to compel the prosecuting law officer of Cook county to bring the suit, which he refused to do on the ground that there was no reason for the suit being brought, and so the suit has really been one prosecuted by Lydston against the county attorney to bring action against the A. M. A. The decision of the Supreme Court was to the effect that the county attorney should bring the suit. Now if the case is prosecuted further, it will be a suit against the A. M. A. itself. If the courts should hold that it was a violation of the law of Illinois for the house of delegates to elect officers in any other state than in the state of Illinois, it would become necessary to change the plan of electing officers, but will have no influence on the organization itself. The plan is not in question, so that no one need have any fears of the organization itself being disturbed, and the only possibilities, as above stated, may be in the plan of electing officers. It is hoped by the enemies of the association that a decision of the courts which would make it necessary for the election of officers to be held in the state in which the association is incorporated, might interfere and embarrass the present workings of the body itself, but since the organization of the A. M. A. is not and cannot be in question, the problem of a legal manner of electing officers may be reached in some manner that will not in any way impair the usefulness of the great organization itself.

We are offering to our readers two letters that have come to us from an attorney who was anxious to prosecute a malpractice suit against a member of our Society, but failed to secure medical testimony necessary to show that the doctor had been guilty of malpractice, and in

order to get the case before a jury. No malpractice case can ever get to the jury unless there is some doctor who is willing to testify that the treatment was wrong and not in accordance with approved methods. The reader will find abundant evidence in these two letters to indicate the attorney's helplessness and his disappointment in finding that the doctor he counted on failed him at the last moment.

September 29, 1915.

My Dear Sir:

My attention has just been called to an item in a paper. In this item you are reported as saying that; "While you instituted the damage proceedings you knew nothing about the case being dismissed, and if it was dismissed, it was without your knowledge or consent."

It is through the treachery of "Doc" that your case was dismissed. He promised faithfully that he would go to last November and testify. Relying on his promise, preparations were made for the trial. The other side brought witnesses at great expense. At the last moment "Doc" balked. He "double-crossed" you. No human being or human swine ever made a more faithful promise than your unfaithful friend (?) "Doc" then made. He again faithfully promised that if we would take his deposition at, he would tell the truth. I supposed he would. So we arranged for the taking of his deposition before Justice, who issued a subpoena, commanding him to appear and give his testimony. The sheriff served the subpoena upon him. He refused to obey its mandates. There is no law to punish a cowardly falsefiar for such contempt. He knew well that without his testimony your case could not go to trial. Now this heroic friend (?) of yours, to lionize himself, either in person or by an associate, rushes into print, through the paper, and tells how your case became so bad that he the local doctor, "Dr. opened up the wound and discovered about a yard square of gauze inside of the man." (meaning you). "The gauze had been used in the operation and for some reason had been overlooked and the man was sewed up with the doctor's gauze inside. After the removal of the cloth the man began to grow better and it is said he is now nearly as well as ever."

That is great stuff for "Doc" to be booming himself on, when in truth and fact he never opened up any wound in your back. Another fact is, I am told that "Doc" himself handled the gauze at your operation, and he it is who is to blame for leaving the gauze in your back. I say this because I believe it's the truth. I say it because he has not only deceived you, by refusing to testify, but is trying now to deceive the public. In fact he is as full of deception as a

mackerel is of bones. That is why he has double-crossed you at every turn of the road.

As a greedy, avaricious dollar-chaser, your friend (?) "Doc"..... is a success. But after hearing him spoken of generally by members of the medical profession, and then talking to him personally, one readily sees that he is an ignoramus, with about as much learning in the science of medicine and surgery as the average show-ring Chester White has of Darwin's Origin of Species or of Buckle's History of Civilization.

Your case was not dismissed by me, but by the Judge of the District Court at....., for lack of prosecution. And this, I repeat, was because of the treachery of your learned (?) friend (?) "Doc"..... If had told me honestly and truthfully how the deplorable accident occurred, and that he himself was as much to blame as any one else for the gauze having been left in your back, and had discouraged the bringing of the suit, instead of denouncing and blaming someone else, I should never have brought the suit. I state these facts that you may see and understand where the blame now belongs. To blame me for it after working as long and hard as I have worked and spent the time and money that I have spent on the case, is wrong, absolutely wrong, infamously wrong.

Most respectfully yours,

September 30, 1915.

My Dear Sir:

In my letter to you yesterday, I did not half express my feelings and contempt for that dirty, rotten "Doc"..... The way in which he has treated you in the..... case, is infamous and damnable, beyond expression.

He not only deceived you, and piled insult upon insult, and prevented you from recovering a good sum for the damages you have sustained, but has succeeded in piling upon you a lot of costs to pay. And now for you to ask me to help pay these costs, after I have been insulted and damaged by his treachery and infamy, almost as much as you have, is very unreasonable. I have paid out and expended every dollar that you advanced to me and more, in getting ready for this trial, and in the outlay I made to procure expert testimony. I would not have taken one thousand dollars (\$1,000.00) in cold cash, for my fees and consented to have had the case gone in the way that cowardly, treacherous cur has forced it to go. I know there must be a lot of costs taxed up against you. Now your rotten friend (?) "Doc"..... has thrown you and the case and all into the ditch. We are helpless.

I sent a carbon copy of the letter I wrote you yesterday, to a party in..... I did not request him not to show it to any one. But if he should do so I don't know as I care. I wish I could smash "Doc".....'s dirty

ugly mug with my big right fist. That is the way I feel toward the dirty, rotten, cowardly cur.

I am very sorry on your account, as well as my own, for the way the case has terminated. And if you are not possessed of sufficient judgment and honor to place the blame for this matter at the threshold of "Doc"....., instead of laying it at my door, then I pity your intellect and your honor both.

Very truly yours,

STARVATION TREATMENT OF DIABETES

Two valuable contributions on the treatment of diabetes appeared in the American Journal of Medical Sciences for October, one by Dr. Frederick M. Allen of the Rockefeller Institute for Medical Research, New York, and one by Elliott P. Joslin of the Carnegie Institute, in relation to Harvard University Medical School, Boston. The treatment referred to is based on experimental work carried on in these two institutes. Forty-four cases were selected out of a considerable number of applicants suffering from severe diabetes, as respects age, social conditions and other factors to make them fairly representative. Two points were considered; first, initial fast, and second, subsequent diet. The duration of the initial fast was in some cases as long as eight or ten days or until the urine became sugar-free. The purpose of the fast was to give complete metabolic rest or as nearly so as possible. "Dangerously weak and emaciated patients have borne the fasting with apparent benefit, giving the impression that they had been suffering more from intoxication than from lack of nutrition." No harm came from the fasting even if the treatment was not always successful, and the few deaths which occurred during the initial fast were easily accounted for from some complication or from infection.

After the initial fast and the urine has become sugar-free, comes the subsequent diet which presents some difficulties. If a long period of dietary watchfulness is not observed and glycosuria and acidosis allowed to return, the last state may be worse than the first. After the urine has been sugar-free for one or two days, feeding is commenced and the tolerance of the patient for carbohydrate fat and protein determined, not by any theoretical standard, but by the amount of each food that can be given in each individual case and keep the urine free of sugar. The first trace of glycosuria is the signal for a fast day with subsequent modification of diet.

The immediate results of this treatment have been very gratifying, but the time is too short to determine the ultimate results.

JOURNAL OF LABORATORY AND CLINICAL MEDICINE

The leading practitioners of internal medicine have joined in offering a new periodical to the medical profession. The question at once arises when a new journal is offered to the public, if there is any room for it. The old cry of filling a long felt want is no longer heard, and the question now is, can a particular journal find a place for itself.

The relation of the laboratory to clinical medicine has been recognized for some time, and nearly every paper emanating from high sources, carries with it the evidence of laboratory investigation in connection with the work set forth in the communication, and today it may be said that no practitioner of medicine who claims to a right of being heard, fails to avail himself of laboratory methods of inquiry. It is to be presumed, however, that the laboratory idea is subordinate to the methods of physical examination, and that the laboratory serves to confirm or direct the findings.

We have before us a journal, which while not reversing the order of inquiry, sets out to furnish the best methods of laboratory study, so as to bring to the internist as well as the surgeon, the most reliable information as to methods that may be employed. Among those who have contributed to the placing of medicine on the highest scientific basis, is Dr. Victor C. Vaughn of Ann Arbor, who has consented to serve as editor-in-chief of this new magazine, and the fact that he has assumed this responsibility, is a guarantee of the high order of the journal, and a promise as to what he will do for medicine in the future.

We sincerely welcome this new undertaking and trust that nothing will arise to prevent Dr. Vaughn's work being agreeable and pleasant to himself, and profitable to the medical profession.

TRAUMATIC HERNIA

The advent of Workmen's Compensation as an economic principle has drawn attention to the influence of trauma in producing hernia, and it now, more than ever, becomes the duty of the medical profession, in the interest of fairness and justice, to consider the subject from the standpoint of recent studies. Dr. Walter M. Brickner, editor of the American Journal of Surgery, in a recent number of that journal, points out in an exhaustive editorial the more recent views and

observations of surgeons whose experience entitles them to speak with authority on this troublesome subject. In the June number of the journal, Dr. Brickner states that the ordinary types of abdominal hernia are not traumatic in origin, that the "strain" or "fall" to which they are so often attributed cannot properly be considered their cause, and that such injury or effort remotely or immediately preceding the discovery of a hernia, should not be compensated under accident or Workmen's Compensation insurance.

In support of this contention, the views of Dr. J. M. Salmon of Ashland, Kentucky, are quoted: "To a reasonable mind this contention must seem absurd. Men have fallen from great heights, from bridges, parachutes, stacks and aeroplanes, and, while their bodies have been terribly mangled and many bones broken, I know of no instance where inguinal hernia has resulted from such accident. Yet we are asked to believe that hernia may result from a fall of two or three feet from the platform of a coach."

It is alleged that hernia occurs as the result of increased abdominal tension, as in heavy lifting, sudden muscular strain and the like. If this is true, why are not *all* ruptured who lift heavy weights,—*all* who fall from trains,—*all* who are thrown violently down by the jar of a collision?"

"Clinical experience and scientific investigation have demonstrated the fact that in the absence of a congenital defect, either in the form of a pre-formed sac, an open funicular process or an abnormal opening in the abdominal wall, inguinal hernia does not occur."

Dr. W. B. Coley of New York states that the great increase in our knowledge as the result of the large number of operations for the radical cure of inguinal hernia that have been performed during the last two decades has proved that, in the vast majority of cases, hernia is a disease rather than an accident.

Tillman says in this connection: "Traumatic hernia is not true hernia. The hernial sac, that is, the true hernia, is always developed gradually, although an injury may, of course, act as part of the exciting cause."

Sultan says: "In the critical examination of a causal relation between hernia and accidents, we must remember first of all, that a hernia, complete in all its parts, can never arise at the moment of an accident, or by a single augmentation of the intra-abdominal tension, be it ever so great."

Only such an abdominal hernia should be considered traumatic as develops at the site of a tear or perforation of the abdominal wall produced by an external injury. If any other kind

of injury, fall or strain is followed by the discovery of an abdominal hernia that injury or strain merely drew attention to a previously existent but unnoticed hernia or, at most, it *"may have supplied the last of a series of forces which resulted in the development of a hernia in the presence of pre-existing abnormal anatomical conditions."* The same thing might have occurred while the patient was lifting his suit case or when sneezing."

Only, if at all, to the extent that an injury or undue strain operated to effect the descent of a previously undeveloped hernia—and with the burden of proof on the individual—should inguinal, femoral and umbilical hernia be compensated as the consequences of accidents, industrial or otherwise?

As a step in the correction by the profession of its previous attitude, and in the education of the law and the public concerning the relationship of hernia and injuries, let us vigorously discourage the use of that misleading term, "rupture."

TYPHOID PERFORATION

An able paper on typhoid perforations was read before the 1915 session of the American Surgical Association and published in the *Annals of Surgery* for October by Dr. John H. Gibbon of Philadelphia, Professor of Surgery, Jefferson Medical College, and Surgeon of Pennsylvania Hospital.

Dr. Gibbon's paper is based on a table of 139 perforations, 112 operated with 27 recoveries (24.1 p.c.), 27 not operated, all died. These cases cover a period of from May, 1901 to 1915 and were all operated by the same group of surgeons. Taking the first period from May, 1901-1902 to May 1908-1909, 87 cases operated, recoveries 22; from May, 1909 to May, 1914, 15 cases operated, no recoveries; from May, 1914 to May, 1915 10 cases operated, 5 recoveries.

Dr. Gibbon very plainly shows that the small number of cases in the hands of a single operator can form no adequate conception of what the real operative mortality is. There are so many factors to be taken into account in perforation operations in typhoid patients. The time after perforation and before operation is of course the most important, but this is not all. In the first series of 87 operations with 22 recoveries, the average length of time between perforations and operation was 20 hours. In the second group of 15 cases with 100 per cent. mortality, the average was 10 hours. It must be apparent that the exact time of perforation cannot always be determined.

In the first two series, under a more conservative course the time may have been fixed from the time of the appearance of unmistakable symptoms. In the last series of 10 operations with 5 recoveries, the operations were probably made as soon as the symptoms were sufficiently suggestive to warrant an exploratory operation.

This point is so important that we feel called upon to make editorial comments on a discussion on this subject before the last session of the State Medical Society. The internists should not for their own interests criticise the surgeon for holding radical views in relation to operative treatment in intestinal perforations, gall-bladder or appendix perforations in typhoid fever. It is a fact that early perforations cannot be diagnosed with certainty in many cases, and if sufficient time is given to make a positive diagnosis, the mortality will be high. Many unnecessary exploratory laparotomies may be made with a lessened mortality from perforation. Very properly the care of a typhoid comes under an internist, but when suggestive symptoms of perforation (not positive) appear, a consultation with a surgeon should be held and a conscientious physician and a conscientious surgeon may, without a question, come together on a course which will be for the best interest of the patient. The issues are too important to permit the predelections of the one or the extravagance of the other to stand in the way. It is not helpful to say that the decision should be based on a positive diagnosis by the internist or to present the extravagant statement of the ease and safety of operations and to claim ten recoveries in eleven typhoid perforations.

CATHARTICS FOLLOWING OPERATIONS

We have for several years past tried to do some missionary work to abolish the illogical and distressing (to the patient) practice of administering a cathartic to a laparotomy patient on the third day after an operation. This has apparently been a religious rite in many hospitals and has been so engrafted on surgeons' brain cells that they seem to operate automatically when the third day arrives. It has seemed to us that the expressions of the patient of the third day experience would be a suggestion at least to the surgeon. Why the empty small intestines should be disturbed by an active cathartic is not quite clear to us. There is always some degree of intestinal paresis from the trauma of an abdominal operation which renders the operation of a cathartic painful. The constipation can cause no harm, and if the surgeon's state of mind demands it, a

pint of fluid containing a proper amount of glycerine and turpentine can be administered per rectum with much more agreeable results to the patient.

These remarks were suggested by a very sensible paper published on this subject in a recent number of the Georgia Medical Association Journal by Dr. H. S. Munroe of Columbus, Georgia.

ALCOHOL AND DRUG ADDICTION

An interesting lecture appears in the Lancet for Oct. 16, 1915, by Sir. Wm. J. Collins on "Ethics and Law of Drug and Alcohol Addiction." He considers the ethics of alcohol and drug addition as examples of the surrender of self control in favor of self indulgence, and proceeds in his argument to show that we have departed somewhat from the law of equal liberties, and have considered the subject from the standpoint of national efficiency. It has been the custom to hold that we should not interfere with the individual liberty insofar as the use of alcohol and drugs are concerned, unless it affected the rights of others; that the individual himself as long as his course of action did not interfere with public welfare, and as his indulgence affected only himself, should not be interfered with. That is, if the individual desired to take alcohol in private, that it was his right and privilege to do so. Otherwise it would be regarded as an infringement on personal liberty.

Within the past year and a half, the world has been inclining to a different philosophy. The events demonstrated by the affairs occurring all over the world, has shown the weakness of this policy of failing to consider the efficiency of the individual unit, and that personal rights cannot be separated from the interest of the state. John Stuart Mill in his essay on "Liberty" held that "the only purpose for which power can be rightly exercised over any member of a civil community, against his will, is to prevent harm to others." This implies that the individual member cannot be rightly compelled to do or forbear because it will be better for him to do so. Herbert Spencer and Humboldt held to the same thing. These philosophers believed that the state should abstain from all solicitude for the positive welfare of its citizens except when the welfare of others may be imperiled. To the mind of the present day reformer, these views of personal liberties seem to be out of order, and that it should be for the state to say how far individual liberty may be permitted, when it may lead to a reduction in the efficiency of the individual unit and therefore effect the general welfare of the state. Today in

our own country we are witnessing what may be termed a benevolent despotism, as illustrated by the recent legislation on the use of habit-forming drugs and on the use of alcohol, and while on account of the recognized theory of state rights, the individual use of alcohol is not absolutely prevented, on account of interstate rights, yet the sentiment is growing stronger each day that there should be some federal legislation which should entirely prevent the individual obtaining alcohol, all of which leads to the fulfillment of the doctrine that the individual rights of the citizens which was so strongly adhered to in comparatively recent days, should be sacrificed to community interest, based on the belief as already stated, that individual efficiency contributes to community and state and national efficiency. The Czar of Russia could without any consideration of public sentiment, promptly declare that the use of strong alcoholic drinks should be suspended for the benefit of the state. We likewise through legislative enactment accomplish what Russia accomplishes by an edict, so it seems that we may now lay aside the doctrines of the early philosophers, John Stewart Miles, Herbert Spencer, Humboldt, and others, and enter the domain of a philosophy, which disregards the individual and considers only the state. This change in views seems to be necessary to meet the growing complexities of modern government.

HEART MURMURS

Sir James Mackenzie makes some interesting observations in relation to the significance of heart murmurs which were published in the British Medical Journal for October 16, 1915.

It has been known for a long time to experienced examiners that certain heart murmurs were not incompatible with normal heart function and many a man has no doubt been rejected on account of not well understood murmurs or heart irregularity when, in fact, the organ was perfectly normal. Sir James Mackenzie was led to make these observations on account of the large number of men rejected for the army by examiners who recognized these apparent abnormalities as evidence of heart weakness. Sir James says:

It should be understood that the healthy heart in the young can exhibit murmurs, and variations in rate and rhythm, which are perfectly physiological in origin and indicative neither of disease nor of impairment.

Before examining the heart, find out the **functional efficiency** by ascertaining how it responds to effort. This is shown by finding out the amount of exertion the candidate has been accustomed to take in the

past in his work or play, and if he can undergo severe bodily exertion without distress.

The physiological murmurs are always systolic in time, and the situation of the greatest intensity may be at the apex, mid-sternum, or base of the heart. If the candidate's response to effect be normal, and the heart normal in size, the murmur is negligible, for it is manifest that, if the cause which produces the murmur hampers or embarrasses the heart in its work, the size of the embarrassed chamber will increase, and its functional efficiency be impaired.

There are only two forms of irregularity that need be considered. Irregularities indicating serious mischief will be associated with such diminution of the functional efficiency that the candidate would not seek to recruit—such as the irregularity of auricular fibrillation or of heart-block.

The most common irregularity is that which occurs in the healthy heart of the young. It is characterized by a lengthening and shortening of the pauses between the beats; it will often be found to vary with the respiration, the beat increasing in rate during inspiration and decreasing during expiration. When it does not have the characteristic respiratory character it can be made to take on the character by getting the candidate to breathe slowly and deeply for a few minutes. It is frequent in perfectly healthy hearts, and is therefore of no importance, and candidates should not be rejected on account of its presence.

In rare cases the pulse may be found intermitting more or less frequently. If the heart be auscultated, two short sharp sounds rapidly following one on the other may be heard during the pause. If this is the only sign present—that is, if the functional efficiency of the heart be good and the size normal—then these extra systoles are of no significance and the candidate should not be rejected.

Many candidates whose hearts are perfectly healthy suffer from palpitation or excited action of the heart during examination. The beat becomes forcible and rapid and a systolic murmur may be present. If such a candidate be told to lie down and breathe slowly and deeply for a few minutes the heart's action becomes less violent and the rate slows during expiration. With a history of good functional efficiency the candidate may be considered suitable for enlistment.

We have ourselves made the same observations on young men examined for the railway service, some of whom had been previously rejected by other examiners and referred to me for final decision.

This is an important subject and well worth careful consideration.

MEDICAL FEES AND NEW YORK COMPENSATION LAW

In New York the medical fees and other charges are subject, under Section 13 of the Compensation Law, to regulation by the Commission, and are

“limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living” so that in this state the medical fees are not restricted by a hard and fast maximum as is the rule in many states, nor are they left to the Commission without a definite ruling being laid down by the law for the determination. Following the provisions of Section 13 as above mentioned, the Commission of necessity cannot, with proper respect for the rule there provided adopt any hard and fast schedule for all cases to be applied in all communities of the state to all persons of varying standards of living.—(Medical Economist, October, 1915.)

FINNEY'S PYLOROPLASTY

Dr. J. M. T. Finney in the American Journal of the Medical Sciences, October, 1915, bases certain conclusions on one hundred cases of what is known as the “Finney Pyloroplasty.” It will be remembered that fourteen years ago Dr. Finney devised an operative procedure which gained great favor with surgeons in cases of ulcer near the pylorus. In certain selected cases Dr. Finney holds as follows:

1. The operation has certain advantages over gastroenterostomy, and but few of its disadvantages.

2. The operation has its greatest indication in the relief of pyloric stenosis due to chronic ulcers, situated at or near the pylorus, and on either side of it, or resulting from cicatricial contraction following the healing of such ulcers. It is often a useful procedure in cases of hemorrhage due to gastric ulcers on the lesser curvature, or to duodenal ulcers which cannot be controlled medically and which threaten the life of the patient, as well as in the chronic dyspepsias due to ulcers which have not been relieved by medical treatment.

3. The special advantages of this operative procedure lie in its affording the opportunity to excise all ulcers, whether perforated or not, in the anterior walls of the stomach or duodenum after direct inspection of the part affected; also the application of treatment to ulcers situated in the posterior walls. It does not greatly disturb the normal relation between the stomach and intestines, as is the case in other operations.

4. Such objections as are urged against the operation, e.g., its inapplicability in the presence of adhesions surrounding the pylorus, as well as in the presence of active and bleeding ulcers, and also because of the fact that the new opening is not at its lowest point, taking advantage of gravity, are according to our experience more fanciful than real, since the operation has frequently been performed under these conditions with most gratifying results. The interesting experimental work of Cannon and Blake and others, supports this contention.

5. The only contra-indications to the operation are inability to mobilize the duodenum when adhesions are too dense, and thickening and infiltration

about the pylorus due to hypertrophic forms of ulceration. These conditions, however, in our experience occur but rarely.

6. In atony or gastropstosis with slight motor insufficiency such as is observed in the water-trap stomach, or in nervous dyspepsia, i. e., in gastric disturbances not dependent upon organic disease, this operation is contra-indicated.

7. From our experience with the operation the immediate as well as the final results are most encouraging. While in some instances partial gastrectomy and gastroenterostomy is undoubtedly the operation of choice, nevertheless, on account of its simplicity and because of its satisfactory end results, we believe that pyloroplasty will continue to retain its position as a safe and useful procedure.

THE FACTOR OF POVERTY IN SANITATION

The factor of poverty in sanitary problems was discussed in Washington, November 26th, by Surgeon General William C. Gorgas, whose success in cleaning up Havana and the Panama canal zone has brought him recognition as America's leading sanitarian. His audience was the Clinical Society of Surgeons, assembled in their twenty-fourth annual meeting. Dr. Gorgas said, in part:

"Such sanitary work as is necessary in the tropics is inexpensive, but measures directed against special disease are not the greatest good that can be accomplished by sanitation.

"Before these great results that we can all now see are possible for the sanitarium, we shall have to alleviate more or less the poverty at present existing in all civilized communities. Poverty is the greatest of all breeders of disease and the stone-wall against which every sanitarian must finally impinge.

"During the last ten years of my sanitary work I have thought much on this subject. Of what practical measure could the modern sanitarian avail himself to alleviate the poverty of that class of our population which most needs sanitation? It is evident that this poverty is principally due to low wages; that low wages in modern communities are principally due to the fact that there are many more men competing for work than there are jobs to divide among these men. To alleviate this poverty two methods are possible, either a measure directed toward decreasing the number of men competing for jobs, or, on the other hand measures directed toward increasing the number of jobs.

"The modern sanitarian can very easily decrease the number of men competing for jobs; if by next summer he should introduce infected *Stegomyia* mosquitos at a dozen different places in the southern United States he could practically guarantee that when winter came we would have several million less persons competing for jobs in the United States than we have at present. This has been the method that man has been subject to for the last six or seven thousand years, but it does not appeal to me, nor, I believe, to yourselves. This method is at present being tried on a huge scale by means of the

great war in Europe. I do not think that I risk much in predicting that, when this war is over and we shall have eliminated three or four million of the most vigorous workers in Europe, wages will rise and for a long time no man will be unable anywhere in Europe to get a job at pretty fair wages.

"But I am sure that every sanitarian would much rather adopt measures looking toward the increase of jobs rather than, as we have done in the past, submit to measures that decrease the number of competitors for jobs.

"I recently heard one of the members of the cabinet state that in the United States 55 per cent. of the arable land, for one reason or another, is being held out of use. Now suppose in the United States we could put into effect some measure that would force this 55 per cent. of our arable land into use. The effect at once would be to double the number of jobs. If the jobs were doubled in number wages would be doubly increased. The only way I can think of forcing this unused land into use is a tax on land values.

"I therefore urge for your consideration, as the most important sanitary measure that can be at present devised, a tax on land values."

SICKNESS INSURANCE

B. S. Warren, Washington, D. C. (Journal A. M. A., December 11, 1915), says that the problem of the wage earners health is, next to that of unemployment, the most pressing one now before us. There are approximately 30,000,000 wage earners in the United States, every one of whom loses an average of about nine days per year on account of sickness. This estimate is based on an investigation made of about 1,000,000 industrial workers and nearly coincides with the German and English figures to the same effect. Estimating the daily wage as \$2 and the cost of medical services at \$1 per day, the annual loss would amount to over \$800,000,000, not counting the human suffering and losses due to death and decrease in efficiency. At times poverty is caused by disease and then again disease is caused by poverty, and this vicious circle must be broken. The causes of sickness are many. For some the industry is responsible; there are others for which the workers alone are responsible, and there are also community conditions for which the public is responsible, but there are many for which there is a joint responsibility and an overlapping in which each must share in the work for betterment. The industrial causes are numerous and often obscure, but are clearly shown in many occupations when careful records are kept. The responsibility of the public is becoming more and more recognized, and greater efforts are constantly being made to avoid them and prevent them. In spite of the efforts of the employers to decrease occupational risks and of the public to improve health conditions, there remains a large residue for which the employees are themselves to blame. Warren points out, however, that they cannot be held entirely responsible for every part of their en-

vironment, and poverty and ignorance go hand in hand. He figures the cost and maintenance of a wage earner's family and the inability of the larger part of them to maintain good healthful home conditions. Co-operative action is apparently the best remedy for this, and he sees it in a system of sickness insurance and offers what he considers a practical plan, which is given in detail. Such a plan can be carried out, he thinks, as a health measure, and if it could be put into practice it would be the greatest possible health measure ever enacted.

CHIROPRACTORS

T. F. Duhigg, Des Moines, Iowa (Journal A. M. A., December 25, 1915), in view of the coming legislative sessions in which the chiropractors will be apt to demand recognition, gives some account of the chiropractor schools and quotes at length a report of the inspector of the Pennsylvania Bureau of Medical Education and Licensure on the three chiropractic colleges of Davenport, Iowa. While the chiropractic school is not recognized in Iowa, and its practitioners are subject to fine, it probably graduates more of this class than any other three states. The Pennsylvania inspector's report shows very fully what sort of qualifications the output of the Iowa chiropractic schools furnish. "It is sufficient to say that the three schools are uniform on the following points: None has a library, a hospital, a laboratory that is worthy of the name, postmortems or capable teachers." According to the report the preliminary and graduation requirements correspond.

THE EVANS MEMORIAL FOR CLINICAL RESEARCH

The Evans Memorial for Clinical Research is desirous of coming into communication with as many physicians as possible who have used bacterial vaccines in the treatment of typhoid fever for the purpose of collecting statistics concerning the efficiency or non-efficiency of the method as a therapeutic measure. If any who have done this even with only one or a few cases will send their names and addresses, blank forms will be sent to them upon which uniform reports may be made. Due credit will be given to each in any reports that may be published. Kindly address all communications to Dr. W. H. Watters, 80 East Concord St., Boston, Mass.

A QUESTION OF ETHICS

Burlington, Ia., Dec. 20, 1915.

Editor Journal:

I come to you with a problem in Medical Ethics which has puzzled me not a little and would be glad to have a solution from the readers of the Journal or the editor.

Was called to see an indigent woman in a town in north Missouri suffering from osteomyelitis of the tibia. The members of the medical profession

had refused to attend the case on account of her poverty.

An osteopath had volunteered his services and was treating her as best he could.

I am now called to operate and what shall be my attitude toward him?

You will remember a wounded man was once passed up by a priest and a Levite, but at last fell into the hands of a man who had compassion on him.

What shall I do?

C. H. MAGEE, M. D.

Will someone please answer the doctor's question?

A RUPTURE CAUSED BY STRAIN IS AN ACCIDENT OR UNTOWARD EVENT

(Poccardi vs. Public Service Commission [W. Va.], 84 S. E. R. 242)

The Supreme Court of Appeals of West Virginia holds that a rupture caused by a strain while at work is an accident or untoward event, arising in the course of employment, and compensable under the workmen's compensation act. Proof of apparent previous good health, a heavy and unusual lift in the course of work, discovery of the rupture on the second day thereafter, death from surgical operation for relief thereof, and opinion of the operating surgeon that the rupture was caused by the lifting, is sufficient to establish accidental injury in the course of employment, within the meaning of said act. The court says that, responding to medical criticism of the theory of rupture by strain or exertion, the Washington Industrial Insurance Commission has adopted rules requiring proof, in cases of claims predicated on hernia: (1) That its origin was recent; (2) that it was accompanied by pain; (3) that it was immediately preceded by accidental strain in hazardous employment; and (4) that it did not previously exist. Similar rules have been adopted by the commission. Notwithstanding the criticism calling forth these rules, they impliedly admit possibility and probability of rupture from a strain, when the strain and rupture are in close relation. So does an article by the attorney for the Michigan compensation board, published in the National Compensation Journal, brought to the attention of the court by the brief for the commission. Both the rules and the thesis admit the English proposition that an internal injury, resulting from a strain while at work, is an accident, within the meaning of the act, and their limitations or restrictions on proof of the fact have not been judicially approved.—(The Journal of the American Medical Association.)

The American Aid Committee
Alaaggasse 11, Vienna

Vienna, the 25th Sept., 1915.

To the Editor:

The undersigned committee respectfully submits the enclosed appeal for voluntary subscriptions to

the fund for **Blind and Invalid Soldiers of the Austro-Hungarian Monarchy** with the earnest request that you give the same a prominent space in your valued paper (journal, magazine).

The Imperial War Alleviation Office; a branch of the Imperial Ministry of War, in Vienna, stands sponsor for us and has undertaken the distribution of all funds collected.

We would kindly ask you to assist us by starting a subscription in your city, and to forward all contributions to His Excellency the Ambassador of Austria-Hungary in Washington, D. C., who will be pleased to receipt for the same.

Thanking you in advance for any and all assistance in this good cause, we remain,

Yours very sincerely,

The American Aid Committee in Vienna,

DR. GEO. A. KUBLER,

Chairman.

Appeal for Aid

More than a year has passed, in which the Austro-Hungarian troops have been at the front, arrayed against grim and manifold enemies, who from all sides, North, East and South, seek their destruction.

In the spirit of intrepid and unconquerable defense have the Austro-Hungarian soldiers, united in true comradeship with the Germans, held their own against mighty attacks; they have overpowered their opponents, and, together with their faithful allies, won for themselves never fading glory.

On battlefields hundreds of miles long, on the vast plains of Russia, in swamps and wooded wilds, in the snow and ice-covered canons and abysses of the Carpathian mountains, in the rocktowers, the peaks and the glaciers of the Alps, on the sun-burned declivities of the Karst, on the borders of the Danube, the Save, the Vistula and the Bug, the San, the Dnjester, and the Isonzo, as well as on the waters of the blue Adriatic, everywhere have these brave men bravely struggled. Ever and everywhere have they fulfilled their warriors duty, full of enthusiasm, never fearing death, with never-failing courage, and never-swerving devotion.

Thousands have died the death of the hero. Thousands are brought back with fearful wounds. Due to charitable and well-organized care, by means of modern chirurgical appliances, it has been possible, not only to save the lives of the greatest number of the wounded, but also to heal them completely. However, a large proportion, in the flower of their youth, and the full strength of their manhood, have suffered an irreparable loss of legs, or arms, or of eyesight.

These men are indeed to be pitied. They have given their best to their country and are now helpless and unable to work.

From poverty and need must these stricken men be protected. Their fate must be alleviated by artificial members, by instruction in the different occupations for the crippled and the blind, by the purchase of all necessary material for these purposes! By all the ways and means possible to science must

their lives be made more bearable, more beautiful!

Is there a nobler aim than this?

All ye, who possess a heart for these courageous soldiers, all ye near and distant countrymen of these sufferers, without regard for nationality, or religion, all ye manful, citizens of free America, to ye all we address the heartfelt prayer: Help these brave men in their misfortune!

But especially upon you, ye women of America, who are ever ready with comforting and helpful hand to alleviate misery, we turn to you with the prayer: Give them your help, help these brave unfortunates!

In assisting these crippled men, you assist their wives and children!

Every contribution is welcome, even the smallest!

The collections will be directed to the Imperial Austro-Hungarian Embassy in Washington, D. C. Their distribution will be undertaken by the Imperial War Alleviation Office in Vienna. The names of the donors will be published.

The American Aid Committee in Vienna.

FIRST MEETING OF THE AMERICAN FIRST AID CONFERENCE, WASHINGTON, D. C., AUGUST 23 AND 24, 1915

The following resolution was passed at this meeting: That the questions noted below be sent to the Chief Surgeons of Railroads, Mines and Manufacturies, first, to be answered by them; second, that a copy of these questions be sent by the Chief Surgeons to their Associate Surgeons.

The object of these questions is to attempt to get the opinion and experience of a number of surgeons and to formulate them for publication.

Please answer each question on a separate sheet of paper and sign your name to each sheet:

1. What has been your experience with the most available first aid package and dressing for small and large wounds.

2. What has been your experience with the immediate employment of antiseptics in accidental wounds; what antiseptic have you used, in what strength, and how applied? Have you employed tincture of iodine; if so, how and what have been the results?

3. What in your experience has been the most efficient and most readily applied method of fixation for injuries of the (a) upper and (b) the lower extremity?

4. Have you considered the construction of a stretcher, which, in addition to serving as a means of transportation of injured, will have appliances for the fixation of the upper and lower extremity, somewhat along the lines of a Bradford splint, or the Gihon naval splint?

5. Please state your views on some liquid ointment dressing which would be available for first aid in large wounds and burns with the object of preventing the usual dry-gauze dressing adhering to the wound and rendering subsequent dressings painless.

These questions have been sent to all the members of the Association of Railroad Chief Surgeons of America, and a few other Civil and Military Surgeons.

Please give these questions your personal attention, first, and mail your answers to the Secretary, at the same time writing him and giving him the number of copies of these question sheets desired to mail to your Associate Surgeons.

Very sincerely yours,

JOSEPH C. BLOODGOOD, Sec'y,

Baltimore, Md.

Resolution Adopted by the American First Aid Conference, Washington, D. C., August 24, 1915

Your resolution committee has the honor to report that it has carefully considered the resolution which was committed to it and has redrafted it as follows:

Whereas, There is a great lack of uniformity in first aid methods; in first aid packages, and in other first aid equipment; and in first aid instruction, and

Whereas, Many of the aims of first aid are defeated thereby and needless suffering and expense incurred, Therefore, Be it Resolved:

That this Conference recommends to the President of the United States that he appoint a "Board on First Aid Standardization," said board to consist of one officer each from the Medical Corps of the U. S. Army, the Medical Corps of the U. S. Navy, the U. S. Public Health Service, the American National Red Cross, the American Medical Association, the American Surgical Association and the Association of Railway Chief Surgeons of America; this board to deliberate carefully on first aid methods, packages, equipment and instruction and to recommend a standard for each to a subsequent session of this Conference to be called by the Permanent Chairman; the creation and maintenance of the said board to be without expense to the United States.

Your committee further reports that it has personally consulted the Assistant Solicitor of the Treasury and he has given the opinion that there is no legal objection to the resolution or its purpose.

The committee has also personally consulted the secretary to the president and he has assured your committee that it is his personal opinion that the president will take favorable action in the premises.

Committee on Resolutions:

W. C. RUCKER, Surgeon U. S. P. H. S.,
MAJOR ROBERT U. PATTERSON,
M. C. U. S. A.

Representing the Amer. Nat'l Red Cross
W. L. ESTES, Chairman Comm. on
Fractures, Amer. Surg. Ass'n.

PLANS OF NATIONAL CONFERENCE OF CHARITIES AND CORRECTION FOR INDIANAPOLIS MEETING ANNOUNCED

Announcement has been made of business and local committees of the Forty-third National Conference of Charities and Correction, which is to be held at Indianapolis, May 10-17, 1916. One of the most

interesting committees is that on change of name, for it has been advocated by some members that a title be selected which more truly indicates the nature of the body, which is the national union of social workers. In preparation for the reception of the Conference at Indianapolis committees have been organized throughout the state for the purpose of making a great exhibit of the progress of Indiana in matters of social welfare during the past one hundred years, as the centennial of her admission to the Union will be celebrated in 1916. Organized social work, both public and private, has been growing by leaps and bounds in this central region, and it has been thought that the record of attendance at the last National Conference (2600) may be more than equaled.

The president, Dr. Francis H. Gavis, of Indianapolis, has had more than thirty years' experience in social service in that city, and occupies a unique position in that he is the first Catholic clergyman ever to preside over this conference. The last issue of the Bulletin of the Conference is devoted to a review of social legislation during the year 1915. Nearly 500 measures are described and classified, varying in character from the authorization of women police in New Jersey to the establishment of suspended sentences for wife deserters in Hawaii.

BOOK REVIEWS

REVUE DE MEDICINE AND REVUE DE CHIRURGIE

We have been advised by the publishers that the two important French journals—*Revue de Medicine* and *Revue de Chirurgie*, suspended since August, 1914, will resume at once and that subscribers will receive the issues for the remainder of 1915 free of cost.

A TEXT-BOOK OF HISTOLOGY

By Rudolph Krause, A. O. Professor of Anatomy at the University of Berlin. Translated From the Original Manuscript and Printed Only in the English Language. Cloth, Price, \$2.50. Rebman Company, New York.

In reading this text-book of Histology, Professor Krause's most recent addition to medical literature, one is constantly reminded of the fact that the subject of Histology is best understood when taken together with Anatomy and Physiology, and that in the variation of histological structures which are found in the different organs of the body, there has been a definite purpose in its peculiar histological structure, so as to render that organ most capable of performing its function.

The book opens with a discussion of a cell, in which are outlined the varying structure of the cell, and also briefly its functions, and thus the reason for the differentiation for the parts of the cell is made clear. From the cell the next step is to tissues, and from the tissues to the histology of the organs forming the various systems of the body. Through-

out the entire discussion the author has kept the purpose of the organ as the important factor determining the reasons for the particular character of structure found in each organ.

The text-book is designed primarily for students, and represents Professor Krause's manner of presenting the subject to his classes, and is therefore more of an outline for study than a general discussion of the subject. We regret that the book does not contain a larger number of illustrations, for although a student may have the specimens before him, good illustrations are most useful in helping the student to interpret the real specimen. The book on the whole is well gotten up, and will prove very helpful to students of Histology.

THE MEDICAL CLINICS OF CHICAGO

Volume One, Number Three (November, 1915). Octavo of 200 Pages, 23 Illustrations. W. B. Saunders Company, Philadelphia and London. Price, Paper, \$8.00; Cloth, \$12.00 Per Annum.

The contributors to this number are among the best known medical clinicians in Chicago. Dr. Charles S. Williamson presents several patients.

Dr. Ralph C. Hamil presents an interesting series of cases of neuritis with full notes on the subject.

Dr. Frederick Tice presents a number of surgical cases which have important medical bearings, also a valuable clinic on nephritis.

Dr. Isaac A. Abt gives a very interesting clinic on hysteria in children, a somewhat difficult problem in family practice. In addition he gives a rather full clinic on children's diseases of the kind that every family doctor is interested in.

There are two other clinics of particular interest; Abdominal Pain, by Walter Hamberger and Landry's Paralysis, by Dr. C. L. Mix.

SYPHILIS AS A MODERN PROBLEM

By William Allen Pusey, M. D., Professor of Dermatology in the University of Illinois. Published by the American Medical Association. Price, Paper, \$.25; Cloth, \$.50.

Among the activities of the American Medical Association is the publication by recognized authorities of monographs on various subjects the public ought to know about. These monographs are written for the lay reader and sold at a minimum price for educational purposes. The three great plagues: syphilis, tuberculosis and cancer are known something about by the general public in a fragmentary way, but a better and fuller knowledge can be brought to the people by monographs prepared by properly equipped writers in language free from technical expressions.

Members of the medical profession are frequently solicited for information in relation to questions regarding syphilis. No better service could be rendered than placing this little book in the hands of the inquirer.

NITRO BY HYPO

By Edwin P. Haworth, Superintendent of The Willows Maternity Sanitorium, Kansas City. Price, \$1.00.

This little book treats of many things in relation to doctors. It is not a medical book but it is worth reading by medical men. It tells us about different kinds of doctors. We have seen many of the pictures drawn and recognized them at once. There is the loud talking doctor who knows little of the science of medicine; he has immense assurance and discourses on medicine in the presence of the old ladies with the wisdom of an oracle, but is usually silent at a medical meeting. He has a following more or less numerous according to the community in which he practices. Then there is the silent wise doctor who is always rescuing almost hopeless patients from the grave; who rarely reads books and journals. There is the optimistic doctor full of hope but scant of knowledge. There is the doctor who reads so much that he knows but little that is useful. There is the real doctor who believes he ought to know what other doctors say, who invests a percentage of his income in books, journals, and efficiency apparatus, and has much or little wisdom in making his merits known.

The psychology of the practice of medicine has many remarkable phases. Many years ago we knew a doctor practicing in Story county who had such artistic gifts in the use of profanity that it was well worth a day's travel to hear him, and his gifts in the use of alcohol were scarcely less. He was careful not to let a night overtake him without being intoxicated, and yet his fame as a doctor was such that people came for him with wagons with a plentiful supply of straw in the bottom to take this doctor home, "sober him off" so he could prescribe in the morning, all this in the face of well informed and competent practitioners in the same community. The man did not, in fact, possess knowledge or skill. We once heard a very wise medical philosopher say that every doctor must "play his own game," to copy after anyone else was usually dangerous, as he would probably betray himself. To fairly consider the psychology of the practice of medicine, one must take into account the make-up of the community. Some communities need more kinds of doctors than others, and generally we find the "various kinds" drifting about until they find the right place—if ever they do. The encouraging thing about it all is that the real doctor may select a congenial community, and by persistence, knowledge, skill and uprightness of character, succeed.

This very readable book will give restful entertainment after a full day of exacting, and it may be depressing, work.

PEDIATRICS AND ORTHOPEDIC SURGERY. VOLUME V. OF THE PRACTICAL MEDICINE SERIES FOR 1915

Edited by Drs. I. A. Abt and John Ridlon, of Chicago. Price, \$1.35. The Year Book Publishers, 327 S. La Salle Street, Chicago.

This very handy little volume brings up to date for practical usage the literature on the subjects mentioned for the year 1914.

The matter is well presented for ready reference.

W. B. Saunders Company, publishers of Philadelphia and London, have just issued their 1916 eighty-four page illustrated catalogue. As great care has evidently been taken in its production as in the manufacture of their books. It is a descriptive catalogue in the truest sense, telling you just what you will find in their books and showing you by specimen cuts, the type of illustrations used. It is really an index to modern medical literature, describing some 300 titles, including forty-five new books and new editions not in former issues.

A postal sent to W. B. Saunders Company, Philadelphia, will bring you a copy—and you should have one.

PROPAGANDA FOR REFORM

Tanlac—Tanlac (The Cooper Medicine Co., Dayton, O.) is a "tonic and system purifier" and is exploited to the public by means of extravagant and absurd claims. From an examination made in the A. M. A. Chemical Laboratory it appears that Tanlac is essentially a vinous extract which contains 15.7 per cent. absolute alcohol by volume, a bitter drug (such as gentian), an emodin-bearing drug (such as buckthorn, rhubarb or cascara), a berberine-bearing drug devoid of hydrastine (such as berberis aquifolium), glycyrrhizic acid (from licorice), and flavored with wild cherry and to which has been added a relatively large proportion of glycerin. The "Tanlac Laxative Tablets" which accompany Tanlac contained phenolphthalein (Jour. A. M. A., June 5, 1915, p. 1930).

E-Lep-Tine—E-Lep-Tine is an "epilepsy cure." According to the Indiana State Board of Health, it contained sodium and potassium bromides 16 per cent., alcohol and ammonium valerate (Jour. A. M. A., June 12, 1915, p. 2006).

Herbetta Curine—A package of Herbetta Curine contained three envelopes, labeled 1, 2 and 3, respectively, and in addition a number of red tablets. The A. M. A. Chemical Laboratory found that No. 1 consisted of tablets which contained soluble iron phosphate; No. 2, of tablets which contained some "bitter tonic," and No. 3, of tablets responding to tests for aloes and aloin. The red tablets were composed essentially of strontium and potassium bromide (Jour. A. M. A., June 12, 1915, p. 2006).

Lepso—The A. M. A. Chemical Laboratory found this to contain bromides, equivalent to fifty-one grains potassium bromide per dose of one-half ounce (Jour. A. M. A., June 12, 1915, p. 2006).

Iodex—Iodex (Menley and James, Ltd., New York) is said to contain 5 per cent. of iodine; the advertising suggests that the effects of free iodine are to be obtained from the preparation, which yet is said not to stain the skin. It is also claimed that thirty minutes after inunction, iodine can be found

in the urine. The chemists of the A. M. A. Chemical Laboratory on examination found that Iodex contained only about half the claimed amount of iodine, that the iodine did not behave as free iodine and that after inunction of Iodex, iodine could not be found in the urine. Because of these findings and because of the unwarranted therapeutic claims made for the preparation, the Council on Pharmacy and Chemistry held Iodex ineligible for New and Non-official Remedies (Jour. A. M. A., June 19, 1915, p. 2085).

Venodine—Venodine (The Intravenous Products Co., Denver) was stated to be "an Intravenous Iodine Compound" put up in ampules, each of which contains "twenty-eight grains of Sodium Iodide, $\frac{1}{8}$ grain each of Beechwood Creosote and Guaiacol in a suitable vehicle, and excipients to enhance its compatibility with the circulating blood." The "Therapeutic Indications" were said to include "infectious diseases, such as syphilis, tuberculosis, bronchitis, bacteremias associated with chronic and acute nephritis (Bright's disease), and other infections." The Council on Pharmacy and Chemistry found Venodine ineligible for New and Non-official Remedies because it was exploited under unwarranted and grossly exaggerated therapeutic claims; because neither the name nor the advertising matter indicated that it was a preparation of the well-known sodium iodide; and because the combination of two such similar substances as creosote and guaiacol is unscientific, adding mystery to the preparation without increasing its efficiency (Jour. A. M. A., June 26, 1915, p. 2155).

Calcreose—Calcreose (Maltbie Chemical Co., Newark, N. J.) contains in loose combination approximately equal weights of creosote and lime. The advertising claims having been revised, the Council on Pharmacy and Chemistry postponed definite action pending submission of proof (1) that the large doses of Calcreose recommended furnish large amounts of creosote to the blood and (2) that patients taking these large doses do not suffer from digestive disturbances, loss of nutrition, albumin in the urine or phenol urine as claimed. At the same time it was emphasized that this action did not indicate a belief on the part of the Council that enormous doses of creosote are necessary or beneficial in tuberculosis. So far, the Maltbie Chemical Co. has not submitted the required evidence. As the Council's postponement of a report has been made to appear as a quasi-approval, the Council, voted to announce that Calcreose had been refused recognition because the therapeutic claims were exaggerated and unwarranted by the evidence (Jour. A. M. A., June 26, 1915, p. 2155).

Intravenous Radium Solution—Standard Radium Solution for Intravenous Use (Radium Chemical Co., Pittsburgh), is sold in ampules, each containing radium bromide equivalent to 0.05 mgm. radium element and 0.0002 gm. or less of barium bromide dissolved in 2 cc. sterile normal salt solution. While the Council on Pharmacy and Chemistry confirmed the claimed composition of this solution so far as concerns the radium content, it refused recognition

to the preparation because there is no clear evidence that intravenous injection has any advantage over the other methods of administering radium. The Council holds that on the basis of our present knowledge radium should be used intravenously only by those in a position to study its effects carefully and in an institution equipped with the necessary facilities for such study (Jour. A. M. A., June 26, 1915, p. 213).

Rheumalgine—Rheumalgine (Eli Lilly and Co., Indianapolis) is put up both in tablet form and as a liquid. Each tablet, or teaspoonful of the liquid, is said to contain: "Strontium salicylate from Natural Oil five gr., Hexamethylenamin two gr., Colchicine 1/200 gr." The Council on Pharmacy and Chemistry found Rheumalgine in conflict with its rules in that unwarranted therapeutic claims were made because the combination is conducive to uncritical prescribing and because the name, being non-descriptive of its composition, encourages thoughtless use (Jour. A. M. A., June 26, 1915, p. 2156).

Typhoid Vaccine—Extensive clinical trial indicates that typhoid vaccine may influence the course of the disease favorably. The results indicate that, if used with discretion, typhoid vaccines do no harm (Jour. A. M. A., June 26, 1915, p. 2139).

Antox—"Dr." W. J. Garbutt, Milwaukee, Wis., sells antox. It is said to cure every contagious disease if taken at the onset. Garbutt issues two sets of advertising, one for physicians and one for the public. The A. M. A. Chemical Laboratory found that essentially each 100 c.c. contained approximately 0.92 gm. ammonium chlorid, 0.12 gm. hydrogen chlorid (equivalent to 1.2 c.c. of diluted hydrochloric acid, U. S. P.), 0.35 gm. hydrogen sulphite (equivalent to 6 c.c. of sulphurous acid, U. S. P.), and 18.5 gm. of invert sugar (Jour. A. M. A., July 3, 1915, p. 45).

Gray's Glycerine Tonic—The Council on Pharmacy and Chemistry reports that Gray's Glycerine Tonic Comp. (Purdue Frederick Company, N. Y.) is not eligible for admission to New and Non-official Remedies because its composition is secret; because grossly unwarranted therapeutic claims are made for it; because the name of this pharmaceutical mixture does not indicate its chief constituent, gentian, and because its use is unscientific and a detriment to rational medicine. From the statements made in regard to its composition it appears that besides the alcohol, gentian is the only active drug present. Nevertheless the "tonic" is said to be good for no less than thirty-two diseases, ranging from amenorrhea to whooping cough (Jour. A. M. A., July 10, 1915, p. 189).

Liquid Petrolatum—Liquid petrolatum is sold under proprietary names such as Bakurool, Interol, Med-O-Lin, Muthol, Semprolin, Whiteruss, Nujol and Stanolax. Nujol is put up by the Standard Oil Co. of New Jersey and Stanolax by the Standard Oil Co. of Indiana. Probably before long each of the other Standard Oil companies will have its own name for liquid petrolatum—that is, if physicians will tolerate it. There is no excuse whatever for

special brands of liquid petrolatum, so far as the medical profession and the public are concerned. But it is otherwise with those who supply the product. More can be charged for a product sold under a trade marked name and claims can be made which could not be made when the product is sold under its proper title, liquid petrolatum (Jour. A. M. A., July 10, 1915, p. 175).

Tongaline and Ponca Compound—The Council on Pharmacy and Chemistry reports that Tongaline, Tongaline Tablets, Tongaline and Lithia Tablets, Tongaline and Quinine Tablets and Ponca Compound Tablets, products of the Mellier Drug Company, St. Louis, are ineligible for New and Non-official Remedies because their composition is indefinite and semi-secret; because grossly exaggerated therapeutic claims are made for them; because their names are misleading, and because their composition is unscientific and irrational. Tongaline is essentially a sodium salicylate mixture. Its name is derived from one of the asserted constituents, "tonga," an inert, long discarded mixture of barks and herbs said to be gathered and prepared by Fiji Islanders. In addition, Tongaline is stated to contain blue cohosh, colchicum and pilocarpin. The amounts of the ingredients are not now declared. Neither is the composition of the Tongaline and Quinine and Tongaline and Lithia Tablets made known. Ponca compound is a "female weakness" remedy in tablet form. The name suggests that "Ponca" is a medicinal substance and at one time "Ext. Ponca" was named as an ingredient. Now the tablets are said to contain extract of mitchella repens, senecin, helonin, caulophyllin and viburnin. Not only are no quantities given, but the character of senecin, helonin, caulophyllin and viburnin is not made known (Jour. A. M. A., July 17, 1915, p. 269).

Horowitz-Beebe Cancer Treatment—Newspapers are giving much attention to a new "serum"—Autolysin—for the treatment of inoperable cancer. This had its origin in the publication by S. P. Beebe, formerly professor of experimental therapeutics at Cornell Medical School of a system of treatment by "Alexander Horowitz, Ph. D., an Austrian biologist and chemist," and its trial at the General Memorial Hospital. The composition of the preparation is not disclosed as to quantities, but it is said to be made from: *Menyanthes trifoliata*, *Melilotus officinalis*, *Mentha crispa*, *Brassica alba*, *Anemone hepatica*, *Viola tricolor*, *anthemis*, *fructus colocynthis*, *lignum quassiae*, *Urtica dioica*, *radix rhei* and hedge hyssop. One critic of the matter has remarked that apparently the only ingredient which has been overlooked in the preparation of the new remedy was a rabbit's foot (Jour. A. M. A., July 24, 1915, p. 336).

Echinacea—This is one of the drugs which the Council on Pharmacy and Chemistry has found valueless. Confirming this, the chemists of a pharmaceutical house report that they were unable to detect the presence of any physiologically active substance in the drug (Jour. A. M. A., July 24, 1915, p. 342).

O'Neil's Malt Whiskey:

Mountain Valley Spring Water:
 Stafford Mineral Springs Water:
 Sa-Yo Mint Jujabes:
 Houchens' "Family Physician":
 Dr. Martel's Female Pills:

Quickstep, Frye's Remedy:

Gray's Glycerin Tonic—A "Notice of Judgment" has been issued by the Federal authorities regarding each of the proprietary preparations named. Each was found to be misbranded under the Shurley amendment to the Federal Food and Drugs Act which declares it illegal to make false and unwarranted therapeutic claims for medicines (Jour. A. M. A., July 24, 1915, p. 350).

M. I. S. T. No. 2—M. I. S. T. (Murray's Infallible System Tonic) No. 2 is sold as a cure for cancer, locomotor ataxia, paralysis, diabetes, suppressed and profuse menstruation and a host of other conditions. Analysis in the A. M. A. Chemical Laboratory demonstrated that M. I. S. T. No. 2 consists of capsules which contain aloes and blue mass as their essential constituents (Jour. A. M. A., July 31, 1915, p. 446).

Caldwell's Syrup Pepsin—Some of the claims made for this "patent medicine" are "Positive Relief for Constipation," "Dispels Colds, Headache, Fevers and all ills caused from Bad Digestion, Foul Stomach, Torpid Liver and Sluggish Bowels." While the name and the claims suggest the presence of pepsin, L. F. Kebler, the government chemist, reported that this nostrum is an aqueous alcoholic solution containing laxatives flavored with oil of peppermint and devoid of any appreciable amounts of pepsin. Regarding the laxative constituents the A. M. A. Chemical Laboratory reports that a senna preparation is the essential laxative constituent (Jour. A. M. A., July 31, 1915, p. 447).

COMING MEETINGS

Meeting of Dubuque County Medical Society, Hotel Julien Dubuque, Tuesday, February 22, 1916, at 7:30 P. M. The program follows:

The Diagnosis and Elimination of Chronic Focal Infection Associated with Teeth—Wm. H. G. Logan, M. D., D. D. S., Chicago.

Focal Infection—Wilbur E. Post, M. D., Chicago.

The Relation of the Tonsils to Systemic Infection—H. G. Langworthy, M. D., Dubuque.

The Southwestern Iowa Medical Society, Creston, Iowa, Thursday, February 17, 1916.

Program 9:30 A. M.

Reading of the minutes.

Some Questions on Ethics—C. T. Lesan, Mt. Ayr.

Paper—C. A. Weaver, Cumberland.

Dinner, 12 to 1:30.

Some Thoughts on the Various Phases of Typhoid Fever—J. C. Olmacher, Clarinda.

Traumatic Epilepsy Complicated after Fifteen Years by Traumatic Cerebral Hemorrhage—T. B. Throckmorton, Des Moines.

Congenital Deformities—J. P. Lord, Omaha.

Paper—G. I. Armitage, Murray.

Paper—B. B. Davis, Omaha.

Cæsarian Section—T. B. Dorsey, Keokuk.

The Continuous Sponge in Surgery—C. A. Boice, Washington.

Paper—J. Ross Carr, Grand River.

Dental Infections in Relation to General Diseases—Geo. Brooks, Greenfield.

The officers are Geo. Mogridge, Glenwood, president; Enos Mitchell, Grand River, secretary-treasurer.

SOCIETY PROCEEDINGS

The annual meeting of the Boone County Medical Society was held December 15, 1915, and the following officers were elected: President, L. A. Bassett, Boone; Vice-President, C. L. Updegraff, Boone; Secretary-Treasurer, Ben T. Whitaker, Boone. The society will hereafter hold monthly meetings.

At the meeting of the Cedar County Medical Society held at Tipton, January 21st, the following program arranged for the benefit of the public was given:

Sanitation in Home and School—W. N. Moore, West Branch.

Child Welfare—Miss Etta C. Wilson, R. N., Stanwood.

Village Sanitation—C. G. Stookey, Mechanicsville.

Farm Sanitation—Graydon Johnson, Mechanicsville.

Solo by Miss Marie France.

Medical Supervision of School—Prof. H. W. Grimes, Stanwood.

Personal Hygiene—Miss Mildred Yule, County Superintendent of Schools.

Plain Talk on Health Matters—J. E. Luckey, Vinton.

The first of the 1916 monthly meetings of the Cerro Gordo County Medical Society was held at Mason City, January 25th with about forty physicians of the county in attendance. The terms of the law in regard to "quack" doctors was discussed by Attorney Clair Smith, of Mason City. The scientific program was:

Gastric and Duodenal Ulcers—Chauncey F. Smith, Mason City.

The Advantages of Circumcision of the Tonsil over its entire Removal—Frank G. Murphy, Mason City.

What's Ahead—Albertus J. Burge, Mason City.

Report of Special Cases—By members of the society.

The principal points brought out by Dr. Smith are:

First—The numerous theories as to the cause and origin of these ulcers.

Second—The changed ratio of duodenal to gastric ulcers as established by clinical observation.

Third—The absolute certainty with which a diagnosis can be made if the general rule as given by

Dr. Mayo can be rigidly applied, namely, (a) Complete History; (b) Examination by Fluoroscope and Röntgen Ray; (c) Physical Examination Including Stomach Tube Findings; (d) Laboratory Diagnosis.

Fourth—The accurate and satisfactory treatment both medical and surgical which can be instituted after such a diagnosis.

Dr. Murphy said that many of the best operators in this country were viewing the American fad of tonsillectomy with much less enthusiasm the last year or two. He said that tonsillectomy was a major operation, that the death roll was larger than many physicians thought it to be, that much scar tissue and deformity of the palatal muscles followed the operation and many times a second operation was necessary.

He said that circumcision of the tonsils was a safe operation practically devoid of pain and hemorrhage, and that it effectively disposed of the tonsils as a source of local or systemic infection.

Dr. Murphy said that he believed that no more than 10 per cent. of the people with diseased tonsils would submit to tonsillectomy but that 75 per cent. would submit to the circumcision of the tonsil and that the benefits derived from it in any community would be in about that proportion.

The Dallas-Guthrie County Medical Society met at Arlington Hotel, Adel, January 20th. Dr. F. A. Ely, of Des Moines, addressed the society, his subject being, "Society and the Moron."

The annual meeting of the Dubuque County Medical Society was held at Hotel Julien, Dubuque, January 11th. The following officers were elected: President, H. B. Gratiot, Dubuque; Vice-President, John M. Walker, Dubuque; Secretary, C. A. McGuire, Dubuque; Treasurer, H. M. Pahlas, Dubuque. Following the business session, a sumptuous banquet was held in the evening at Hotel Julien. The after dinner speakers were: Louis Murphy, Internal Revenue Collector, who spoke on the Harrison Law; W. H. Torbert, spoke on the subject, "Why Doctors Should be Advertisers;" Dr. C. M. Steffens, President of Dubuque German College and Seminary, had for his subject, "The Relations of the Physicians and the Clergy."

The January meeting of the Mahaska County Medical Society was held the 18th at Oskaloosa. The officers elected for 1916 are: President, F. J. Jarvis; Vice-President, E. B. Wilcox; Secretary-Treasurer, E. D. McClean, all of Oskaloosa.

The recent midwinter meeting of the Linn County Medical Society held at Cedar Rapids January 26th was the get together meeting. Dr. H. E. Pfeifer, of Cedar Rapids, gave a report on some Arthritis cases; Dr. H. M. Ivins, gave a case report and Dr. Arnold R. Moon, of Williamsburg, addressed the society, relating his European experiences while at Graz, his subject being Two Years in a Foreign Clinic. The

members and guests were entertained at a buffet luncheon by Dr. C. S. Krause and Dr. R. K. Keech. About sixty were in attendance.

The annual meeting of the Marshall County Medical Society was held at the Marshalltown Club, Marshalltown, January 26th.

The election and program of the evening followed the annual dinner served at 7:30. The addresses of the evening were given by Dr. A. J. Burge, of Mason City, and Dr. Strauss, of Chicago.

Dr. Burge spoke on "The Influence of the Local Hospital in Our Medical World and Practice of the Future." The doctor called attention to the need of more nurses, and referred to the fact that the cost of graduate nurses was so high as to be prohibitive to many people. He thought the solution was in the training in local hospitals of nurses who, before graduation, would be better able to care for cases than the ordinary practical nurse.

Dr. Strauss spoke interestingly on "Stomach Surgery."

The officers elected are: President, R. F. French; Vice-President, A. C. Conaway; Secretary-Treasurer, G. M. Johnson; Delegate, W. S. Devine, all of Marshalltown.

At the regular meeting of the Polk County Medical Society held at the Savery Hotel, January 25, 1916, the following resolutions relating to the death of Dr. Thos. F. Kelleher were adopted:

"Whereas, Death has removed from us a valuable member and friend of the Polk County Medical Society in the person of Dr. Thomas F. Kelleher, whose demise occurred on January 3, 1916, following one year's invalidism and consequent retirement from active practice,

"In acknowledgement of his valuable service to the cause of medicine and the high regard held of him, both by the members of the medical profession with whom he came in contact and the large number of persons to whom he administered,

"Be it resolved, That as a tribute to his memory these resolutions be recorded in the proceedings of the Polk County Medical Society and a copy of the same forwarded to his bereaved family."

The scientific program for this meeting was:

Practical Diagnosis and Treatment of Benign Tumors of the Bladder—Edw. J. Harnagel.

Society and the Moron—F. A. Ely.

Dr. Harnagel's paper is thus summarized:

Until recently the surgery of all tumors of the urinary bladder was very unsatisfactory. Efficiency demanded improvement in both diagnostic and treatment methods. Both requirements were fulfilled in Beer's method of applying the high-frequency current. This is easily and safely employed, and by its prompt effects upon the benign tumors differentiates them from the malignant variety with greater certainty than even histologic methods. Papillomata melt quickly under its influence, but cancers are not affected by it.

Dr. Ely brought out the following salient points:

(1) That the public is very greatly indebted to the psychologists working in connection with the Juvenile Courts for our increased knowledge of the higher types of feeble-mindedness and delinquency arising therefrom.

(2) That the logical field for the study of criminology is in the Juvenile Courts, where the elementary psychology of the child may be studied in its relation to crime.

(3) That a study of the moron enables one to better understand the higher types of criminal delinquents.

(4) That the moron has a mentality equal to that of a child between the ages of seven and twelve years, no matter what his stature or chronological age may be.

(5) That the moron should be treated and supervised as a child and not expected to be able to conduct himself and his affairs with the prudence of a more advanced mind.

(6) That the female moron is not infrequently very attractive physically, and that this physical attraction, taken together with a mature body and the impulsiveness of a child, frequently leads to moral downfall and prostitution.

(7) That not all morons can be cared for in state institutions, but that, as Dr. Goddard suggests, the public must be educated to recognize them and to understand that they are children mentally and must be treated as children.

(8) That systematized records of mental standardization must be kept in our public schools in order that these individuals of low mentality may be early recognized and thus protected.

(9) That within the last two years a jury of one of the New York courts acquitted a young man for murder in the first degree on the ground of imbecility, after Dr. Goddard had shown by mental tests that he had a ten-year-old mind in an adult body; this being the first case on record in which feeble-mindedness has ever been placed on a legal plane with insanity.

(10) That a low estimate made by competent observers places the percentage of feeble-mindedness in our state prison population at 25 per cent., and in our reformatory population at 50 per cent., and that of the young women placed in one reformatory because of sexual crimes and prostitution fully 97 per cent. were mental inferiors.

The Scott County Medical Society met in regular session January 4, 1916. The program consisted of the following numbers:

President's Address—A. P. Donohoe.

Treatment of Pernicious Anemia—J. D. Blything.

The Probability of a Normal Labor. How Early Can We Make a Diagnosis?—W. L. Allen.

Dr. Donohoe in his retiring address first dwelt on the necessity for organization. The high degree to which the labor and the commercial worlds have brought their organizations, was referred to. The physician was urged to emulate these and the good would be very manifest.

That consultations are less frequent than formerly and that they are of a different type was brought out. The laboratory was given credit for this. In fact the laboratory was referred to as the "consultant" of the future.

He urged all physicians to be medically well read. The laity is becoming so well posted on topics medical, it behooves the physician to keep up with the latest.

The society was appealed to, to make this year the greatest in our history, in order that we may make the state meeting in May the greatest ever held in Iowa.

Dr. Blything's paper is summarized as follows:

The interest aroused by Eppinger's report in 1913 on the results of splenectomy in pernicious anemia, hemolytic jaundice and Banti's disease has directed and stimulated laboratory and operative effort toward the elucidation of the physiology of the spleen, and its role in diseases associated with massive destruction of red blood cells.

The conclusions of many experimenters point with remarkable agreement to the spleen as an organ concerned in the hemolysis of these diseases, but not in itself the *fons et origo* of the hemolytic agent. The removal of the spleen breaks the continuity of the morbid process, but does not cure the disease, since the blood never so far as yet shown, returns to normal.

Improvement of all symptoms, and of the general physical condition of the patient may reasonably be expected in pernicious anemia following splenectomy. This improvement is not a spontaneous remission, since it is more rapid, more complete, and longer lasting.

Dr. Allen's conclusions are:

Either normal labors are found less frequently than formerly or our views as to what is a normal labor have changed. One of the most important factors necessary to a normal labor is the strength of the uterine pains and the strength of the patient to endure and to continue to endure severe uterine pains for many hours.

It is these two factors which our modern life and our changed conditions have to a marked degree affected. Social duties, teas, late hours, much automobiling, no walking, high heeled shoes, corsets, have not given our women a preparation to have strong uterine pains and to endure them if they have them.

Moreover the modern woman does not want to endure pain. She reads of "Twilight Sleep," and she wants few babies and wants them to come without pain. To put a person in training for as hard a siege as a prize fight should begin before marriage.

Reports from numerous obstetricians throughout the country show a decided increase in the per cent. of primiparas requiring surgical assistance.

It is the contention of the author that we should not only make an early diagnosis but also undertake the early care of all pregnant women.

The members of the Wapello County Medical So-

ciety, December 7, 1915, were the guests of their indefatigable Secretary, Dr. J. F. Herrick at the Ballingall Hotel.

After an excellent dinner, an exceptionally good paper on "Essential Hæmaturia" was given by our eloquent friend Dr. S. K. Davis, of Libertyville. He went thoroughly into the known and recognized causes of hæmaturia, the means of diagnosing them and then showed that the limitations of our present knowledge and methods of examination, clinically, cystoscopic and X-ray and post mortem leaves a class of lessening size to be sure, which must still be classed as idiopathic or essential. The treatment if the cause was known might in one case be surgical, in another medical.

The following officers were elected to serve during 1916: President, E. B. Howell; Vice-President, W. B. LaForce; Secretary-Treasurer, J. F. Herrick; New Member Board of Censors, W. E. Anthony; Delegate to State Convention, S. A. Spilman; Alternate, B. D. LaForce, all of Ottumwa.

On December 21st Dr. E. B. Howell gave an interesting talk on the use of the cystoscope, reciting his own experience and showing the need of the patients being made as comfortable as possible and quiet psychically. Patience is a virtue which must be cultivated in work of this sort and experience as in other things brings adeptness and judgment. It must be used in connection with the older methods of studying the urinary tract and does not displace them.

Dr. Walter E. Anthony reviewed our knowledge of the causes and symptoms of the wandering kidney, with means usually used to differentiate it from other abdominal conditions. The surgical treatment is not used so frequently as it was a few years ago; other organs are likely to participate in the conditions causing the mobility of the kidney and the operation in such instances does not attack the cause.

January 4, 1916.

Dr. J. F. Herrick gave a talk on the Autonomic Nervous System, using a diagram to show its distribution. It is made up from lines from the cerebral (vagus, etc.) and sacral parts of the cerebro-spinal system (there being no contribution from the brachial and lumbar regions) and from the sympathetic system. There is antagonism between the cerebro-spinal and sympathetic elements, e. g. the vagus, when in control, slows the heart, the sympathetic accelerates. When the higher centers are in abeyance, as in shock, the sympathetic side is in control and we get the dilated pupil—the rapid heart—the relaxed visceral muscles, etc.

Dr. E. T. Edgerly reviewed our present knowledge of the "Physiology of Digestion," beginning with the insalivation and citing the experiments of Pawlow, the psychic secretion, food secretion, etc.—the mechanism controlling the opening and closing of the pylorus, the starting of glandular secretion, the function of hormones, etc.

On January 18th Dr. E. Anthony gave an interesting resume of our knowledge of the function of

menstruation and a very general discussion followed showing a great interest in many conditions connected with the establishment, regularity and cessation of this mysterious episode. It was apparent that all practitioners have many hard problems presented in this field and some that our present knowledge does not answer satisfactorily.

Some features of the Harrison act were discussed and a committee was appointed to post the society on rulings of the department of which the members should know.

E. T. E.

At the annual meeting of the Iowa Clinical Surgical Society held in Dubuque January 29, 1916, Dr. J. C. Rockafellow, of Des Moines, was elected president; Dr. E. R. Shannon, Waterloo, vice-president, and Dr. W. A. Rohlf, Waverly, secretary.

The Sioux Valley Medical Association held its twentieth semi-annual session at Sioux City, January 26th and 27th. The attendance was about 200.

The Iowa and Illinois Central District Medical Association held a regular meeting on the evening of Thursday, January 13, 1916, at Hotel Blackhawk in Davenport with an attendance of about forty-five members and guests. Business transacted included the election to membership of Drs. Oakley and Rinehart, of Moline, Lachner, of Rock Island, and Sprague of Sheffield. The application of Dr. B. H. Smith, of Davenport, was read and referred to censors in usual course.

The program of the evening was: Lymphangitis, K. H. Struck, Davenport; Anaphylaxis, W. H. Rendleman, Davenport; Some Technical Points in the Application of Bismuth Paste in the Treatment of Suppuration, E. G. Beck, Chicago.

Dr. Beck's dissertation on the technique of application of his bismuth paste presented nothing new or unpublished except insofar as first-handed information always presents points of value previously uncaught. That Dr. Beck's diagnostic measure and therapeutic technique are of great value is a belief quite generally held, it balances a good hope for excellent result against a minimal possibility for harm and by so doing constitutes good procedure. Explanation of the technique of application by its originator who is at the same time probably still its chief user, falls within the caption of a classical treat and was so appreciated by this audience. Interest and active intention to use the method were evidenced by the number and character of the questions to which Dr. Beck made reply following the conclusion of his talk. A rising vote of thanks was tendered Dr. Beck. Adjournment was taken until April in Rock Island. Buffet luncheon concluded the evening. Attendance was limited by the unusually severe cold weather.

W. D. Chapman.

The Fayette County Medical Society met February 1st at Donnan. A case report, Pernicious Anemia, was given by D. W. Ward, Oelwein. Dr. George Kessel, of Cresco, read a paper on Upper Abdominal

Symptoms and Their Interpretation which was very interesting and comprehensive, presenting many valuable points relative to the diagnosis of upper abdominal diseases.

The following are the officers elected at this meeting for the ensuing year: President, D. N. Pattison, Oelwein; Vice-President, R. A. McLean, Fayette; Secretary-Treasurer, D. W. Ward, Oelwein; Delegate, J. F. Cole, Oelwein; Alternate, G. D. Dorrall, West Union; Member of Board of Censors, F. P. Leehey, Oelwein.

The Story County Medical Society met in annual session with Dr. F. H. Conner at Nevada, February 2nd with Vice-President Dr. B. G. Dyer, of Ames, presiding.

Dr. D. M. Ghrist, of Ames, read a paper on Fractures, illustrating special means of treatment with wire splints and adhesive plaster. Dr. B. G. Dyer, gave a very interesting talk on the Temporal Bone, illustrating by specimens.

The officers elected for 1916 are: President, R. W. Smith, Roland; Vice-President, B. G. Dyer, of Ames; Secretary-Treasurer, F. S. Smith, of Nevada; Delegate, B. G. Dyer, of Ames; Alternate, F. H. Connor, of Nevada; Program Committee, Doctors Ghrist, Dyer and Bush, all of Ames.

On Friday evening, January 28th, The Des Moines Pathological Society entertained at dinner at the Chamberlain Hotel Dr. Frank J. Hall, of Kansas City. Covers were laid for thirty. After the dinner, Dr. Hall delivered an address, illustrated by lantern slides, on the Bacteriology of Throat Infections. The address characterized by its extremely practicableness was enjoyed by the members of this society and many other physicians of Des Moines and surrounding towns. The Journal is promised this paper for publication at an early date. Look for it.

WESTERN SURGICAL ASSOCIATION

Twenty-fifth Annual Meeting, Held at Des Moines, Iowa, December 17 and 18, 1915

(Continued From January Issue)

President's Address: The Old Art and the New Science of Surgery

Dr. Joseph Rilus Eastman, Indianapolis, Indiana:

Art is the application of means and methods to accomplish desired ends. Science is the systematized knowledge of principles and laws. Surgical art is old. Surgical science is new. Throughout nearly all of historic time surgical knowledge was purely empiric. It was art, not science. Scientific surgery, according to the modern concept, that is, "formulated knowledge of surgical principles and surgical laws, based on biologic facts," may be said to have come into existence during the last century with the birth

of the school of physiologic medicine founded by Broussais, Bichat, Roser of Stuttgart and Wunderlich, who called pathology the physiology of the sick, and the advent of cellular pathology, with the associated new development of the ancillary surgical sciences, as physiology and bacteriology. Thus, the pure sciences of cellular pathology and bacteriology of Virchow and Pasteur established and explained causes, principles and laws which joined with the older and applied science or art of surgery with its knowledge of phenomena and facts and supported by all the rapidly evolving tributary sciences having to do with the origin, structure, development and function of living things, brought forth the newer group science or compound science of surgery.

We think of Morgagni, Magendie, Bernard, Recklinghausen, Rokitansky, Lister and Johannus Mueller and others of their type and generation among the founders of the modern research science of surgery. Concerning the great surgical architects and artists as well as the philosophers of this important period, it is to be said that however much we may admire their ingenuity in invention or their virtuosity in technical performances or their fine skill in spinning theories, we cannot catalogue them among the fathers of present day science along with Virchow and Pasteur and their sympathetic contemporaries. Thus, Lawson Tait, renowned in the annals of surgical art, cannot, if we recall his polemic to Sænger declaring bacteria to be the products of disease, be grouped with Langenbeck and Billroth, surgical scientists who were "as expert with the microscope as with the knife and equally great with both."

The modern composite science of surgery has evolved chiefly in all the laboratories of its separate component and ancillary sciences where surgical art was and is, alas, too often a stranger.

Recently the most valuable contributions to surgery have come from the laboratories of biology. We need no priestess upon a tripod to tell us that surgery of the future will look more and more for strength and inspiration to the vigorous sciences of biochemistry and physiology, though it must continue to rest upon its original footing of normal and morbid anatomy, nor that the way to the most complete surgical development for any individual will lie not only through the "blood and sawdust" but also through the "glass and brass."

Surgical art and surgical research science rarely reach their highest development in one individual and the practical and desirable alternative has been and will be to associate the genius of surgical research in one individual with the gift of surgical art in another in a harmonious working union. The ideal arrangement of the future will be that which includes the establishment of special laboratories of surgical research in close association with the theaters of surgical art, and which includes the close association of both with large facilities for the study of the broader aspects of disease.

Nails and Screws in Joint Surfaces

Dr. Arthur T. Mann, Minneapolis, Minnesota:

Nails and screws are tolerated in joint surfaces in the human as in the experimental cases in dogs. They remain firmly embedded in every specimen. We lost no case. There was an occasional infection in the skin, but no joint was infected. Gloves were used in most cases but bare hands in some of them. All specimens were recovered. In every case where nails and screws have projected out of the joint surface the condyle has overgrown to meet the projection. In some cases there was slightly more than a projection. That is nature's response to the rigid metal projecting into the joint. The overgrowth in the condyle is apparently entirely of bone. Practically all of the covering of soft tissue over the nails and screws has reverted to the connective tissue type and is not entirely of the cartilaginous type, so that we have some specimens six months old. In each case the groove made by the projecting nail or screw has gradually filled up as the projection has become less and less by the overgrowth of the condyle.

Osteomyelitis Involving the Hip-Joint, A Condition Heretofore Designated Acute Epiphysitis

Dr. James E. Moore, Minneapolis, Minnesota:

An acute suppurative synovitis occurs in children under four years which Krause has found to be due to the presence of streptococcus pyogenes. It may be excited by injury or it may occur with the exanthemata. It gives the symptoms of a phlegmon and usually yields to free incision and drainage. It attacks the hip, knee, shoulder and elbow joints.

There is another disease usually placed under this heading that is of a graver character than the above described disease, and which begins at or near the epiphyseal line. It occurs in the hip joint, and has been well described by MacNamara under the name epiphysitis. It is an acute osteomyelitis. The symptoms all point toward an acute inflammation of the hip joint. There is excruciating pain and high temperature followed by deformity and swelling. The joint is so deeply seated that redness does not occur. The symptoms are much more acute than in tubercular osteitis of the hip. There is apt to be an early separation of the epiphysis with rapid destruction of the hip joint. The treatment consists of free incision and drainage. The opening should be made large enough to admit a finger, in order to ascertain whether the epiphysis is separated or not. If separation has taken place, the epiphysis should be removed at once. This is a grave disease, but with prompt treatment the writer has seen cases recover that were seemingly beyond help.

This description was published by the writer eighteen years ago, and is just as good now as it was then. It should be noted that at the time the writer did not accept the commonly accepted term epiphysitis but pronounced it an acute osteomyelitis. Constant observation since that time has only confirmed the opinion then expressed, that this disease does not begin in the epiphysis, but does begin in

the neck of the femur, and one case cited goes to prove that it even may begin in the shaft of the femur. The epiphysis is the favorite site for attack by the tubercle bacillus, but there is no evidence whatever that this is even the original point of infection from pyogenic germs. The reason the name epiphysitis originally suggested by MacNamara over twenty-five years ago has been and still is in vogue is that osteomyelitis is quite rare in this location and the diagnosis is not made until the joint has become involved and the epiphysis has separated from the neck. The epiphyseal line is the point of least resistance and soon gives way and the epiphysis becomes separated. When the joint is opened the floating epiphysis at once attracts the operator's attention and the original opening into the neck of the femur can be easily overlooked. Some reported cases of extremely rapid recovery after the excision of the hip for tuberculosis have not been tuberculosis, but have been cases of osteomyelitis with separation of the epiphysis. Unfortunately the infection in these cases is usually so severe that unless drainage is promptly established the patient loses his life; but in the exceptional case the infection is less virulent and nature may establish drainage by rupturing the abscess through the skin. The separated epiphysis acts as a foreign body and sinuses remain open. Deformity takes place, and the case assumes the appearance of the common tubercular hip, so that it may not be possible to make a differential diagnosis until an operation has been performed and a careful bacteriological examination has been made.

Of the many cases of osteomyelitis involving the hip joint seen by the writer, he presented only four as proof of the correctness of the statements made in his paper.

While the writer advocated the abandonment of the term epiphysitis, he has no new name to offer. The term acute suppurative arthritis is objectionable because there are many cases of acute suppurative synovitis in which the bone is not involved, and they are not nearly so serious. Would it not be well to revive the old term acute osteitis of growing bone?

Experimental Data Opposed to the So-Called Exhaustion Hypothesis of Shock

Dr. Major G. Seelig and Dr. Don R. Joseph, St. Louis:

The above doctors contributed a joint paper on this subject and dealt with the fundamental problem of vaso-constrictor activity in shock. They called attention to the fact that the doctrine of exhaustion of the vaso-motor center in shock prevailed in the minds of many surgeons. This hypothesis is without sufficient warrant. Seelig in collaboration with Joseph studied vaso-motor activity as manifested in the blood vessels of the ears of albino rabbits. In rabbits, it is possible by suitable nerve and ganglion section to remove the vessels of the ear from central vaso-motor control. By denervating one ear and studying the vessels of this ear as control vessels, the investigators were able to show that good vaso-

motor tone is maintained even in the late stages of shock.

Some Experiments With Rubber Gloves

Dr. Carl E. Black, Jacksonville, Illinois:

I discussed the use of rubber gloves from the standpoint of how much they interfere with the tactile sense. I have used a rather unique plan of arriving at this practical question. It is well known that a considerable number of eminent surgeons have steadfastly refused to have their tactile sense blunted by the use of rubber gloves, and have considered it more advantageous to their patients than asepsis. I have made 144 observations on blind pupils who read entirely with their fingers and are entirely dependent on the sense of touch for that purpose. Each observation consists of reading with the fingers thirteen lines approximately 100 words of Braille text printed on both paper and brass plates.

The text was new and unfamiliar and new text was used for each experiment. Six people, three boys and three girls, high school students at the Jacksonville State School for the Blind, were selected for these experiments. A number of tests were made with the bare fingers which showed the average time in which the pupils could read the text with the bare fingers was forty-eight seconds, while the average time for reading 100 words when the hands were covered with rubber gloves of medium weight and well fitting was seventy-seconds. With oil inside the gloves, or rather with the hands covered with oil and then the gloves put on, the time was reduced to sixty-eight seconds, while with the gloves put on with the hands wet the time was still further reduced to sixty-five seconds. The average time for reading with gloves, under all conditions, was seventy seconds.

The observations showed the difference between thin, thick and medium weight gloves. In one observation an excess of powder was put in the glove, while in another observation very loose fitting gloves were used. With loose ill-fitting gloves the average time for reading 100 words was eighty-six seconds. These observations present some interesting facts about the gloves and show the difference between the carefully fitted medium weight gloves and the loose ill-fitting thick gloves. They also emphasize the fact that gloves put on with the hands wet impair the sense of touch less than with the gloves put on dry.

A Paradox in Cancer

Dr. C. E. Tennant and Dr. Casper F. Hegner, Denver, Colorado:

The case presents an interesting sequence of etiological factors with associated carcinoma of the mammary gland. Paradoxically it presents an equally important sequence of etiological factors with which carcinoma at the pylorus is usually associated, but without the carcinoma being demonstrable.

Notwithstanding the long and continued presence of carcinoma extending over a period of ten years,

and two operations for recurrence; notwithstanding the possibility of metastasis and a constitutional predisposition to carcinoma, and the co-existence of a very chronic ulcer at a site most favorable to a development of carcinoma, and that too during the cancer decades of life, carcinoma did not develop.

The history—A widow, aged fifty-eight years; an elder sister died in 1913. Since the age of sixteen years she has been having attacks of stomach trouble with nausea and vomiting. These have been severe and almost constant since 1905. When twenty-three years of age, while nursing her infant, the nipple of the left breast became sore, abscess developed, which was lanced through the nipple.

In 1900, twenty-one years after the abscess, the same nipple became sore again. This continued until 1907 when the nipple was diagnosed as Paget's disease and treated with X-ray without improvement. In March, 1910, there was a superficial pigmented and fibrosed ulceration. The nipple and ulcer area were then excised.

In December, 1911, twenty-one months after the nipple excision, she returned with a mass in the upper inner quadrant of the same breast. This was the size of a hen's egg and adherent to the skin and deeper structures. A complete operation was made, removing the breast, muscle, axillary and supraclavicular lymph glands. Dr. R. C. Whitman examined sections of this tissue and reported scirrhous carcinoma with glandular involvement. Four years after this operation the patient is free from recurrence.

In April, 1915, she presented herself for stomach trouble which had existed since she was sixteen years old. Pain and distress were almost constant, vomiting frequent and a loss of ten pounds in weight.

At operation, the pyloric end of the stomach, the pylorus and the first part of the duodenum were fused into a firm mass firmly adherent to the surrounding structures. The stomach (pyloric end) and the first portion of the duodenum were resected. The mass was excised in wide limits and a posterior gastroenterostomy was performed.

The history and the appearance of the tissues strongly indicated carcinoma and at the time its presence was considered certain. Sections examined by Dr. Hegner proved this last lesion to be one of chronic duodenal ulcer with encroachment on the pyloric end of the stomach.

Slides are exhibited showing the epidermal carcinoma, Paget's disease, the adenocarcinoma, in the same breast, and the chronic ulcer of the duodenum and its gastric encroachment, but without evidence of malignancy.

Further Study of Malignant Disease of the Ovaries

Dr. Miles F. Porter, Fort Wayne, Indiana:

My paper is based on a study made in preparation of a paper on "Sarcoma of the Ovary" presented to this Association two years ago, a study of the literature since that paper was written, and three cases recently occurring in my practice.

Case 1—Aged thirty-three, one child, sixteen years old; general health good, complains of enlargement of the abdomen. I operated seven years prior for non-malignant papillary cyst of the left ovary with pus tubes. No menses for two years. Abdomen the size of seven months pregnancy. Large multilocular ovarian cyst removed, evidently malignant, very adherent. This case illustrates the well recognized tendency to bilaterality of ovarian growths, both benign and malignant. I do not think there was any connection between the first and last tumor. As a result of large experience I am inclined to disagree with those who advise the removal of a healthy ovary because its companion is cystic. This should never be done except perhaps in women near the menopause.

Case 2—Patient was a woman who had been married seventeen years and had had one prematurely born child at seven months. Menses regular. She commenced having abdominal distress two and a half months ago with enlargement of the abdomen. On examination nothing could be found except ascites, for which no cause could be found. Exploratory operation revealed the belly filled with amber-colored fluid and a right ovarian cyst, the size of a coconut (papillary adenocarcinoma).

Fluid in the abdomen which cannot otherwise be accounted for, should lead to exploratory operation.

Case 3—Aged forty-eight; lump in lower right abdomen. Patient has been flowing slightly every day for more than three months. General health fair. Examination led to a diagnosis of myofibroma occupying the right anterior aspect of the uterus. Three months later patient was taken suddenly ill with pain in the right lower abdomen, requiring morphin to allay it. After the third attack the writer was consulted. Operation revealed a solid right ovarian tumor, twisted three-quarters of a turn on its pedicle clockwise. There was very little fluid in the abdomen. On section the tumor was solid, mottled, yellowish-red, in spots hemorrhagic as a result of the twist. Pathologists reported adenocarcinoma. In this specimen the macroscopic evidence of malignancy was so positive that it should have outweighed a laboratory report to the contrary. A negative laboratory report should not be allowed to outweigh a positive diagnosis of malignancy based on the clinical history and examination of the gross specimen. On the other hand, many tumors will show little or no signs of malignancy clinically which on microscopic examination are found to be unquestionably malignant.

I have seen several malignant ovarian tumors without ascites. Why some are accompanied by ascites and others are not, cannot be explained. More rapidly growing tumors are most likely to cause ascites. Ascites does not mean involvement of the peritoneum. Kline suggests that the appearance of ascites in malignant tumors is to be regarded as a protective procedure designed to destroy the tumor, and that, therefore, the subcutaneous injection of ascitic fluid may be regarded as a rational therapeutic procedure. Malignant ovarian tumors may

cause amenorrhea, menorrhagia, or metrorrhagia, or may exist without interfering with the menstrual function. In some cases there is a history of amenorrhea followed by menorrhagia and vice versa. A bloody vaginal discharge years after the menopause has been noted. It may be said that irregularity of the menses is more common in malignant than in non-malignant tumors of the ovary.

I have found one case, supporting Wermuth's statement, that sarcoma in the young may cause premature signs of puberty. This was a girl of six years with the development of a mature woman and who menstruated regularly. Operation revealed a vascular sarcoma and a uterus of adult size.

Bleeding Nipples

Dr. Dean Lewis, Chicago:

The clinical significance of secretion from a non-lactating breast has been variously interpreted. It has been stated that a thin, scanty, sanguinolent discharge is certainly suggestive of carcinoma; that a mucoid discharge is evident of a benign growth, and that a discharge of blood, as markedly bloody fluid, strongly suggests intracanalicular papilloma. Bloodgood states that discharge from the nipple, except during lactation, may be looked upon as a sign of a benign lesion, and not as a symptom of cancer. If the discharge is blood or serum, this is a positive sign of an intracanalicular papilloma.

Seven bleeding nipples have been studied. Five of these have been operated upon. The youngest patient was thirty-five years of age, the oldest fifty-one. The age at which bleeding occurred corresponds to the age of which abnormal involution of the breast occurs. In two instances a cyst was situated superficially about three-fourths of an inch from the nipple. When pressure was made upon the cyst drops or a stream of blood or serum could be expressed. The cysts were the size of a hazel nut. A radical operation was performed in both instances. In one beginning malignant degeneration of an intracanalicular papilloma was found. In the other instance a benign papilloma was found.

In two cases no definite tumor could be found, but when a plastic resection of the breast was performed an intracanalicular papilloma, not much larger than a barley seed was found deep in the duct.

In two instances the bleeding was associated with a chronic interstitial mastitis. In one of these cases a plastic resection of both breasts was performed. In the other case cysts had been removed from both breasts five years before the discharge was noticed. This patient had nothing done, and the discharge has practically ceased for some weeks.

In the seventh case the patient noticed some bleeding from the breast. The bleeding soon stopped, being replaced by an occasional watery discharge. No tumor could be palpated. We are apparently dealing in this case with a small intracanalicular papilloma situated deep in the breast.

Bleeding from the nipple occurs most frequently with intracanalicular papillomata. It also occurs

with the adenocystic type of abnormal involution, with papillary growths in the acini. Both conditions may be grouped together as they are apparently different manifestations of the same process. Conservative plastic operations can be performed upon these cases when seen early.

Cancer of the Lip

Dr. W. W. Grant, Denver, Colorado:

This disease is common in men, uncommon in women. It occurs chiefly in the lower lip, seldom in the upper, and it is associated with the habits and vocations of men, and after middle life. We can neither affirm nor deny a specific germ or the cause, nor would its existence be inconsistent with the influence of chronic trauma as a predisposing cause. This is the precancerous stage. The disease does not originate in healthy tissue. Persistent chronic ulcers, especially with hard base are always suspicious. Differential diagnosis of specific, tuberculous and cancerous ulcerations is not usually difficult. Early diagnosis is of the utmost importance for the unanswerable reason that it determines the prognosis.

Radical excision by the Grant technic is the operation of choice. It is illustrated by diagram and photographs before and after operation, both for excision of the growth and for enlarging the mouth at the corners when rendered necessary by the extensive removal of the lip.

The first step in the operation is the excision of the growth, which is done in one or two minutes. No dissemination of cancer cells, of consequence, is possible in this short time. The reverse procedure is not tenable. Removal of glands is a delicate, slow process, and the danger of dissemination from this manipulation is much greater than with the prompt removal of the focus of infection—the diseased lip.

If the lip is ulcerated, cauterize before proceeding with the operation. The slowly progressive cases are less virulent and due to the basal cell. Gland infection is later in these cases.

The cuneiform and semilunar incisions are bad, as are chin flaps for the construction of the mouth. The stationary non-affected chin tissue is very important for stability and fixation of flaps. Chin flaps do not make so flexible and mobile a mouth as the side cheek flaps.

A "T" drain, with a rubber tube the size of a lead pencil, through the submental space into the mouth, under the tip of the tongue is essential to cleanliness and perfect drainage of the mouth.

(Continued in Our Next Issue)

THE DAVENPORT MEETING.

The sixty-fifth annual meeting of the Iowa State Medical Society will convene in Davenport Wednesday May 10, 1916.

The Hotel Blackhawk will be headquarters; the scientific sessions will be held in the Burtis Opera House; the registration bureau and the exhibits will be in the Moose hall; the House of Delegates and the eye, ear, nose and throat section will meet in the ball room of the Blackhawk.

The section chairmen are:

Medicine—Granville N. Ryan, Des Moines.

Surgery—A. A. Pond, Dubuque.

Eye, Ear, Nose and Throat—L. L. Henninger, Council Bluffs.

The Oration on Medicine will be given by E. T. Edgerly, Ottumwa.

The Oration on Surgery, by Henry H. Clark, McGregor.

The Address on Medicine will be given by Alexander Lambert, New York.

The Address on Surgery, by J. Rilus Eastman, Indianapolis.

The Society is to be congratulated on President Small's securing two such leaders as Drs. Lambert and Eastman as guests of the Society.

The program is now practically complete and promises to be a very interesting one.

A preliminary program will appear in the March issue and the official one will be published in April.

1916 DUES

At this writing February 1st the 1916 dues are being received very rapidly. Several hundred members per day sometimes—checking and comparing names takes time and making out official receipts and membership cards takes more time so there is always, at this time of year an unavoidable delay, therefore if County Secretaries do not receive official receipts promptly, please be patient. Likewise if the membership cards are a little slow please be patient; they will be received in a few days. The names of new members will be entered on the mailing list as fast as checking will permit and back numbers of the 1916 Journal will be mailed them with a regular issue.

OUR ADVERTISERS

The members of the Iowa State Medical Society are invited to give the advertising pages of this Journal a careful examination. They are as carefully edited as the reading pages. Hardly a month passes that some financially profitable contract is not declined because the firm's product does not comply with the rules of the Council on Pharmacy and Chemistry. So kindly fix in your minds the articles advertised and the firms advertising and when you are in need of their goods or services WRITE, always mentioning that you saw the advertisement in this JOURNAL. If you are not in need of their products write to the advertisers telling them that you saw their advertisement and that you will patronize them as occasion arises.

Doctor! Remember, The Journal of the Iowa State Medical Society was enlarged and a better paper used beginning with January, 1915, and a still better paper is to be used in 1916. Compare your January or February, 1916 Journal with the December, 1915 issue. All this is made possible by OUR ADVERTISERS but we cannot expect their continued patronage unless we patronize them.

DEATHS

DR. CORWIN WORTH CORNELL

Corwin Worth Cornell, M. D., Rush Medical College, 1871; aged sixty-six; a Fellow of the American Medical Association; a member of the Iowa State Medical Society; a charter member and for more than thirty years Secretary-Treasurer of the Marion County (Iowa) Medical Society; Councilor of the Seventh District Iowa State Medical Society; Health Officer of Knoxville, Iowa, for many years; U. S. Pension Examiner and local Surgeon for the C. B. & Q. Railroad, died at his home in Knoxville, Iowa, January 12, 1916, from angina pectoris.

Dr. Cornell, the son of Dr. and Mrs. N. R. Cornell, was born in Ohio county, Kentucky, February 28, 1849. In 1850 when less than two years old his parents moved to the then pioneer village of Knoxville, where they remained a short time returning to Kentucky for some years whence they removed in 1858 or '59 to Lamar, Missouri. About the beginning of the civil war they again returned to Knoxville where they remained during the rest of their lives.

Here "Worth" as he was called grew to manhood receiving his education in the Knoxville public schools. His medical education was received at Rush Medical College from which he graduated in 1871. After his graduation, Dr. Cornell located in Knoxville and began the practice of medicine with his father. Soon the lure of the city drew him back to Chicago where he spent some years but his health failed him and he spent some years in Colorado roughing it. Here his health was restored and he returned to Knoxville where for more than thirty-five years he was in active practice.

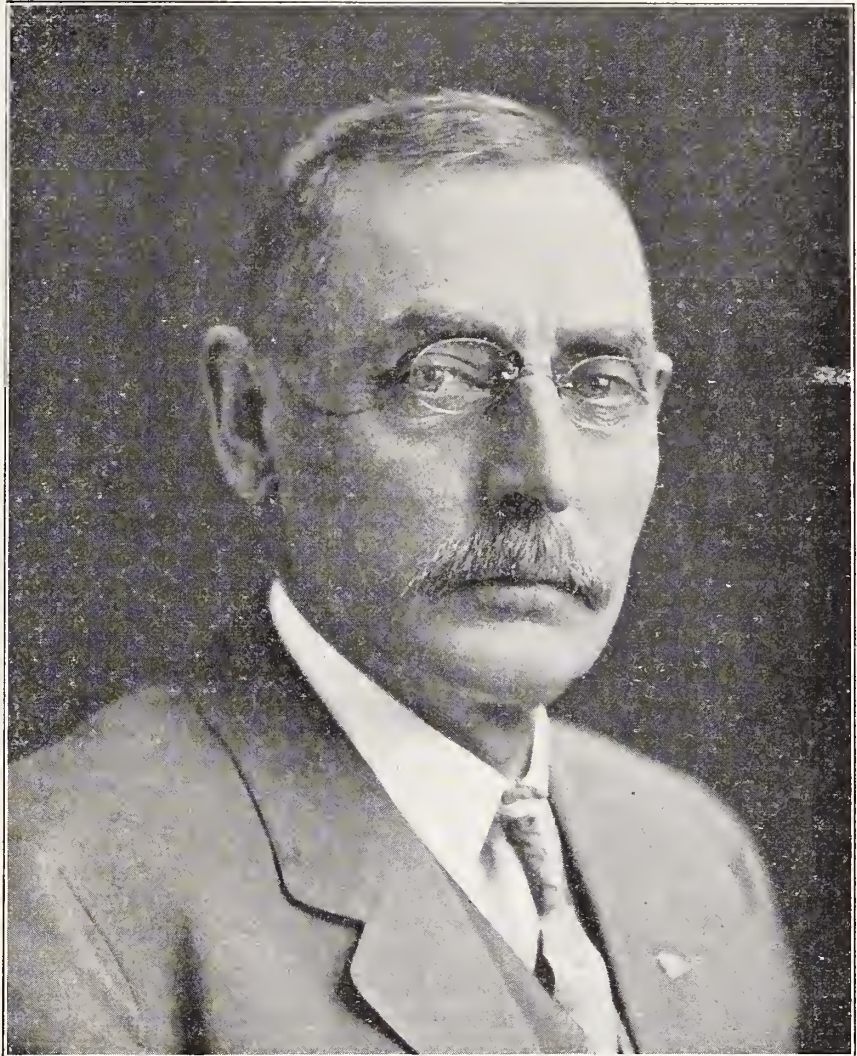
Dr. Cornell was a charter member of the Marion County Medical Society and for more than thirty years its Secretary-Treasurer.

He took an active part in medical society matters, being a regular attendant at the meetings of the state and county societies. At the meeting of the State Society held at Sioux City in 1914, he was elected Councilor for the Seventh Congressional District.

On October 16, 1883, Dr. Cornell and Miss Lena Schaffner, of Burlington, were united in marriage and to this union two children were born, Miss Aimée and Corwin, the latter associated with his father in practice for the past three years.

In the death of Dr. Cornell his many friends and

the profession which he so signally honored have suffered a great loss. To have come in contact with an individual whose character had for its basic principle truth and righteousness in all things; whose adherence always to that which attained to the highest good for the public welfare, never considering it a sacrifice on his part in helping to obtain the best for his community; whose association with his fellow physicians was always accompanied with the



highest respect and esteem, was a privilege and inspiration to those who knew Dr. Cornell.

Always abreast of the progress of his profession, conscientious, giving unto others the very best that was in him, possessing a gentleness and kindheartedness that won him the confidence and love of his patients, his family and many friends will find it difficult to adjust themselves to the indescribable loss they have sustained.

"How strange is it, to still live on
When so much of life and love are gone."

The following resolutions regarding the death of Dr. Cornell were adopted by the Marion County Medical Society.

Whereas, Death has entered the ranks of the Marion County Medical Society and removed from

our number our beloved Secretary, Corwin Worth Cornell, be it

Resolved, That we feel that in his death the society and the medical profession have lost a true friend, a wise counselor, a brother in the true meaning of the word, and the guiding spirit of our society; and be it further

Resolved, That the Marion County Medical Society extend to the bereaved widow, daughter and son our sincere sympathy in their loss; and be it further

Resolved, That a copy of these resolutions be spread upon the minutes of the society and published in the city papers.

Signed by the committee,

J. W. FINARTY,
J. M. WEISS,
E. R. AMES.

DR. FREEMAN HORNIBROOK

Dr. Freeman Hornibrook, the son of Dr. Edward Hornibrook and of his wife, Rosina Stephens, was born September 30, 1878, in Ontario, Canada. He came to this country with his parents when he was about a year old.

He graduated in 1898 from the Cherokee High School. Entered the university. After one year in the University of Iowa, he entered the College of Physicians and Surgeons, Chicago; graduated in 1902, and spent a year as an interne in the Chicago Hospital, acting as an assistant to Dr. Hugh Ferguson and Dr. W. A. Evans.

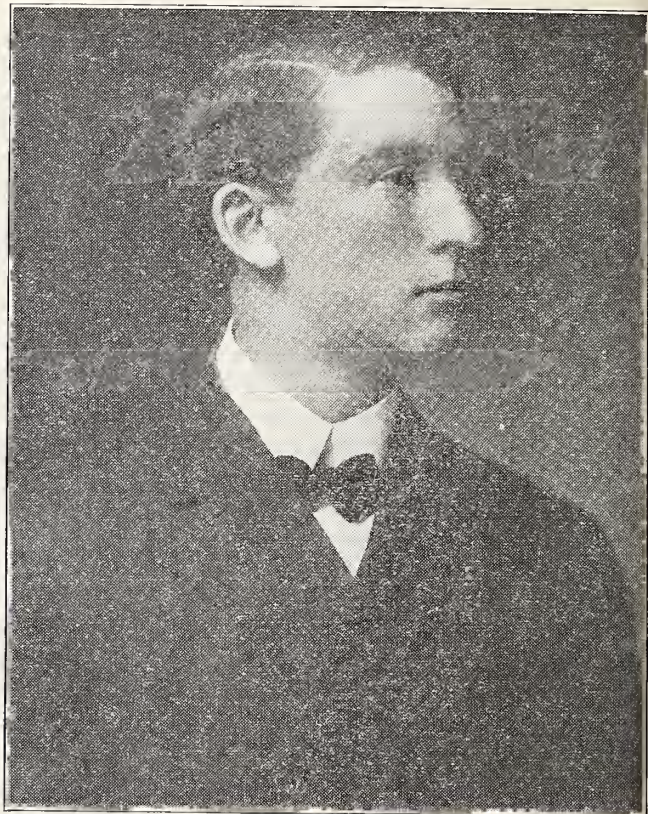
Dr. Ferguson was much attached to young Dr. Hornibrook, and in a professional trip through Canada, he took the young doctor with him as an assistant. Soon following this trip Dr. Hornibrook was himself attacked with appendicitis of great severity. As soon as his condition permitted, Dr. Hornibrook returned to Cherokee and entered upon his professional work with his father in the year 1903.

On August 9, 1906, he was married to Mary B. Steele. Their only son was born March 4, 1911.

Dr. Freeman was surgeon for this division of the Illinois Central Railroad until his rapidly growing practice made it impossible for him to do the work that the position required. Rather than lose his services altogether, the same railroad created the position of consulting surgeon for him. The work was more than a pleasure, for he felt that there was unusual opportunities for learning at these surgeons' conventions where association was possible with the most eminent physicians of the country.

In January, 1913, Dr. Freeman, accompanied by his wife and little son, left for Europe, where he did post-graduate work in Vienna, in the Allgemeines Krankenhaus, the largest hospital in the world, where he did the most of his work, specializing among other studies in tuberculosis. This work enabled him to fill the office of county examiner for tuberculosis cases most ably. He held this office at

the time of his death. The famous obstetrician, Dr. Wagner, of Vienna, appreciated his ability and sent him on occasion to render assistance to students who were unable to cope with difficult situations. His opportunities for observing the specialists at their work in an institution where there were so many patients and the particular training given the students in diagnosing cases, was invaluable to him



as a diagnostician. Here also he perfected an appliance to be used in the case of fractured humerus. He successfully completed his work in Vienna and received his diploma June 5, 1913.

In London he was especially interested in observing the famous Dr. Lane in his work in intestinal surgery.

Always anxious to improve in his profession, he visited the New York hospitals in October of this year, although he was on a pleasure trip with his wife and was greatly in need of rest at that time. He especially enjoyed this last trip visiting the scenes of his wife's college life and meeting her old friends and eastern relatives.

We now with pleasure insert the tribute paid by his own home paper.

"He was a conscientious surgeon. Even in cases where he could give the relatives little or no hope of recovery, he made every exertion to save life, and although he felt that his reputation might suffer by failure he never refused to give the patient the last chance. He was unwearied in his efforts to relieve suffering, often attending cases when he was utterly exhausted and ill himself. He was a man of wonderful strength and great powers of endurance with a hand of remarkable dexterity, hard

as iron and true as steel in the operating theatre, but soft as thistle down when applied to the throbbing pulse or aching brow. When he knew that people were satisfied with his work it gave him the greatest happiness."

"His bright sunny outlook on life helped all who came in contact with him. He tried to live the Golden Rule. His large, generous nature was above all pettiness. He was a member of the Episcopal church, in which he had been reared, and was an unfeigned, sincere Christian in faith and conduct."

"He was a great lover of nature. To him the open country with its flowers, its trees and changing scenes was a never-failing source of enjoyment. He took great pleasure in seeing his loved ones happy and seemed always to be planning for their comfort. It greatly pleased him that he could carry out the surprise at the banquet given to his father to celebrate his fifty years of active work in the profession. He was very proud of his father and of what he had accomplished."

"To his young son he was a comrade, a loving chum. Whenever he could he enjoyed taking him with him on his professional calls. He was a very affectionate, devoted husband. His home life was ideal in every way."

"He died November 30, 1915, at the age of thirty-seven years. He had been able in his short life to do more for his fellow-men than many are permitted to do in a long life."

"We live in deeds, not years; in thoughts, not breath;
In feelings, not in figures on the dial.
We should count time by heart-throbs when they beat
For God, for man, for duty."

"Because of his modesty few knew of the really wonderful operations he had performed and of the service he had rendered not only in the county but throughout Northwest Iowa."

"When Dr. Freeman was in London he found in Westminster Abbey on a monument erected to an eminent physician and surgeon, an inscription which so well expressed his idea of an ideal physician that he asked his wife to copy it, thinking that it applied so well to his father. That the inscription applies with equal truthfulness to the son is the thought of his wife and of all the relatives."

"Eminently distinguished for science, beloved for the simplicity of his manners and the benevolence of his heart, respected for his inflexible integrity and his pure and unaffected piety. In all the relations of his professional life he was sagacious, candid, diligent and humane. Firm in purpose, gentle in execution, justly confident of his own judgment yet generously open to the opinions of others. Liberal and indulgent to his brethren but ever mindful of his own duty to the public. To record their admiration of so rare a union of intellectual excellence and moral worth and to extend to future generations the salutary influence which his living example can no longer diffuse, this monument has been erected."

"He is survived by his wife, his son Thomas, his father and mother, Dr. and Mrs. Edward Horni-

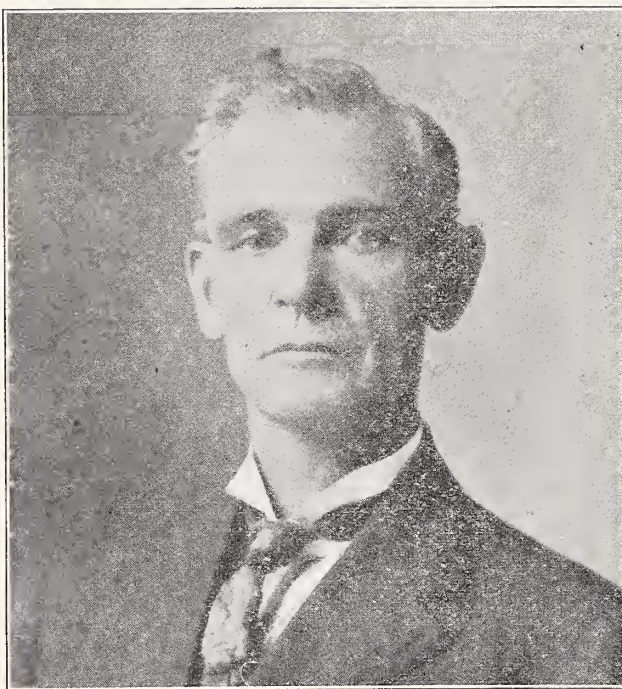
brook, two brothers, E. J. Hornibrook, Twin Falls, Idaho, and Wm. Hornibrook, United States minister to Siam; two sisters, Mrs. H. H. Toman, of Cherokee and Mrs. W. B. Thomasson, of Santa Anna, Cal., several nieces and nephews, and thousands of friends and admirers who join the family in mourning his loss."

"Children loved him, adults admired him, and the aged and infirm put their confidence in him. That he stood high in the estimation of his professional brethren is the best evidence of his fairness and usefulness. Their esteem was shown by the many expressions of regret at his untimely death and the attendance at the funeral of the representative men of the profession from several states."

"Although he was devoted to his profession as few men are, he never neglected his duties as a son, a husband, a father, a brother, a neighbor and a citizen."

DR. MICHAEL F. PATTERSON

Michael Frampton Patterson, M. D., of Fonda, Iowa, died January 13th of myocarditis, age fifty-nine years. Dr. Patterson was a Fellow of the A.



M. A., a member of the State and Pocahontas Medical Societies. He came to Iowa in 1882 and located in Pocahontas county, and remained there until 1895. During the winter of 1894 and 1895 he attended the Chicago Polyclinic, preparing himself as a specialist in eye, ear, nose and throat diseases. In the spring of 1895 he moved to Des Moines and practiced his specialty until 1904 when because of ill health, he returned to Fonda. While in Des Moines he was one of the prominent eye, ear, nose and throat specialists of the state, a member of the staff of Mercy Hospital, and Professor of Ear, Nose and Throat in Drake Medical College.

Balthazar Johannes de Vogel, M. D., Universiteit, van Amsterdam, Amsterdam, 1868. A pioneer of Northwest Iowa, having lived at Hospers for forty years and a successful physician in his day, died at his home in Hospers, from pneumonia, January 27th, aged eighty-four.

Robert F. Nitsche, M. D., Rush Medical College, 1877; for many years a practicing physician at Dubuque, died at his home in Dubuque, January 9th from broncho-pneumonia, aged eighty-seven.

Samuel Dings, M. D., College of Physicians and Surgeons, 1889; member of Iowa State and Washington County Medical Societies; a practicing physician at Keota for twenty-seven years, died at his home in Keota January 14th from pneumonia and complication, aged fifty-eight.

BIRTHS

Dr. and Mrs. H. B. Woods, of Des Moines, a daughter, January 6th.

Dr. and Mrs. George M. Johnson, of Marshalltown, a daughter, January 15th.

Dr. and Mrs. Howard Risk, of Waverly, a son, January 17th.

MARRIAGES

Dr. Clifford Watkin, to Miss Mina DeVries, both of Parkersburg, January, 1916.

CHANGES OF LOCATION

Dr. O. N. Bossingham, of Ringsted, has removed to Marshall, Minnesota.

Dr. J. H. Cook, of Fremont, Nebraska, has located at Marion for the practice of his profession.

Dr. M. A. Taylor, of Clarksville, has removed to New Hampton.

Dr. R. M. Martindale, a practicing physician for the past seventeen years at Worthington, has removed to Andrew where he will continue the practice of medicine.

MEDICAL NOTES

Dr. C. M. Paschal, of Bedford, recently suffered a light stroke of apoplexy.

Dr. and Mrs. A. M. Sherman, of Clarinda, have gone to Florida to permanently locate near Ft. Meyers.

Dr. Walter E. Anthony, of Ottumwa, has accepted a position in the laboratory of Parke, Davis & Co., Detroit, Michigan.

Dr. Charles Ryan, of Des Moines, has just returned from attending clinics at Cleveland, Philadelphia, New York City and Chicago.

Dr. C. S. James, of Durham, while making a night call January 31st was stricken with apoplexy. When

found three hours later his nose, ears, feet and hands were frozen. On account of his extreme age, the doctor is in a precarious condition.

Dr. Jay D. Dunshee, of Keystone, will spend the next four months taking post graduate work in Chicago and Boston when he will locate at Harlan.

Dr. and Mrs. J. M. Dunlap, of Victor, celebrated their sixtieth wedding anniversary New Year's Day. Dr. and Mrs. Dunlap have spent forty-one years of this time at Victor having removed there from Mt. Pleasant. Dr. Dunlap, on account of his extreme age, now in his eighty-second year, is not in active practice.

Dr. C. W. Morrison, of Grand Junction, suffered three fractured ribs and a scalp wound when a Illinois Central train with six coaches went down a twenty foot embankment near Primghar, January 17th. Dr. Morrison was the only physician on the train and rendered all possible assistance to the injured until relief came from Cherokee.

Drs. Henry Albert, A. L. Grover and Jack J. Hinman of the Department of Pathology and Bacteriology of the State University of Iowa, attended a meeting of the Society of American Bacteriologists held at Urbana, Illinois, December 28, 29 and 30, 1915. Dr. Albert presented a paper on "Bacterial Changes in Uniced Specimens of Water" and Dr. Grover read a paper on "Pathogenic Yeasts from the Throat."

HOSPITAL NOTES

St Joseph's Mercy Hospital, recently completed at Mason City, at a cost of over \$200,000, was formally opened and dedicated January 4th. Archbishop James John Keane, of Dubuque, conducted the dedicatory services.

Reverend F. O. Hanson of Duluth, Minnesota, the new elected superintendent of the Iowa Lutheran Hospital, assumed his duties at the hospital this month. Reverend Hanson is a man of wide business experience and with his executive ability the usefulness of this growing institution should rapidly increase.

The executive committee of the Iowa Methodist Hospital at a meeting held January 24th elected Mr. C. C. Hurin, Chicago superintendent, to succeed Dr. W. T. Graham who resigned recently to become superintendent of the University Hospital, Iowa City. Mr. Hurin has been assistant superintendent of Wesley Methodist Hospital, Chicago, for the past four years and comes to Des Moines highly recommended.

THE UNIVERSITY ALUMNI CLINIC

The State University Alumni Clinic will be held at University Hospital on April 11th and 12th. The guests of the meeting will be Dr. E. C. Rosenow of the Mayo Clinic, and Dr. Asa B. Davis, of New York City.

The Journal of the Iowa State Medical Society

Vol. VI

DES MOINES, IOWA, MARCH 15, 1916

No. 3

ORATION ON MEDICINE—PROPHY- LAXIS OF TYPHOID FEVER*

F. C. MEHLER, M. D., New London

Like the subject "Treatment of Pneumonia" the "Prophylaxis of Typhoid" is apt to make many weary. Why is it that with all knowledge of typhoid fever the disease prevails to its present extent? Is it from lack of concerted effort or disinterestedness or do we really lack practical methods of dealing with the plague?

As a body there probably is little question but that the medical profession is not doing all it can do. Let each one of us answer for himself. How many really try to make out the connection between the new case and a previous one, supply the disinfectants and demonstrate their proper use (many think because the dejecta go into sewers and the rivers, the sterilization is of little import), caution the family to observe cleanliness before eating, eliminate the fly and before discharging the patient, examine his urine for bacilli and advise against handling food for others at least for a time?

Of course, no one will argue that if all these things were done typhoid would be excluded. So much depends upon community hygiene, upon sanitation in general, that probably if we did our duty as outlined above, the diminution would be slight and scarcely noticeable. So long as we must depend upon the present type of health boards with its pitiful allowance in supplies and money, we cannot expect the efficient health education for the masses which health boards now accept as a duty. We are woefully lax,—do you realize that a small epidemic can be existent in our average town or city and be unnoticed? Typhoid, a purely preventable and contagious disease, is not reportable in our state. We have need for more extensive facilities for examination of urine and stools of convalescents and suspects in positions where public food and drink are handled.

Food and dairy inspection has very indirect relation to the health department and have usually

been directed, rather to prevention of swindling, than to preservation of health. Our duty to try to bring about recognition of all this is plain, but while we wait for the masses to catch up, let us make the most of what we have to work with.

Milk and water have undoubtedly been responsible for most of our typhoid. Pasteurization, dairy inspection, prompt delivery and proper refrigeration added to cleanliness of healthy herds ought to be the rule. Surely there is nothing complicated about this. Water supplies can be made safe. The individual town and farm well must be protected. Cities using streams must filter in most cases, and the apparent extreme standard of the government is the least that should be aimed at, 10 c.c. of water should show no colon bacilli present. If filtration is not enough, chlorine must be added. No sewerage disposal system for cities and towns is completely satisfactory. The very number of different sorts shows this to be so. The government ought to go over the subject carefully and recommend the type suitable for a given locality. Much money will be spent, and some of it not well, if we continue to experiment or act upon semi-skilled advice.

Vaccination is but little used in civil practice and we are soon going to be urged to test the practicability of this measure in our attempt to control typhoid. It is because of the rather unsettled status of vaccinations that I wish to go into some detail.

A few years after the discovery of the bacillus typhosus by Eberth in 1882, its cultivation by Gaffky in 1884, Simon and Frankel in 1886, produced an effective immunity in small laboratory animals with cultures of living bacilli. Brieger and Wassermann in 1892 found that they could produce as effective immunity with cultures of killed bacilli. In 1896 Pfeiffer and Kolle simultaneously with A. S. Wright, reported the first successful immunization in man. Wright killed the bacilli with a temperature of 60 c., suspended them in salt solution with a small quantity of kresol added for preservation. The results were not satisfactory till Leishman reduced the temperature for killing the bacilli, to 53 c.

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Metchnikoff and Besredka used cultures of living sensitized bacilli. Their results were good but not better than with Wright vaccine which does not possess the possible danger of living cultures.

In this country only killed cultures both sensitized and non-sensitized are used. Sensitized cultures supposedly call forth a quicker response, being injected only two days apart, though non-sensitized produce more lasting results.

Major F. F. Russell, U. S. A., uses a single strain (Rawlins) prepared by Wright and Leishman method, given in three injections, first of 500,000,000; second and third of 1,000,000,000 each, seven to ten days apart, the seven day period being better suited to civil life as they can be given on Saturday, reactions being lessened by rest on following day. The reaction following injection is local and general and is usually slight. Severe local reactions show a large inflamed area at point of injection when occasional soreness of axillary glands; severe general reactions with rise of temperature up to 103 accompanied by headache, vomiting, diarrhea and a feeling of general malaise which disappears before third day.

Spooner noted severe reactions in 4 per cent., a moderate reaction with a temperature not above 100 with some malaise and headache in 10 per cent., and very slight or absent in 86 per cent.

Hachter and Stoner noted absence of distinct reaction in 87 per cent. Russell in 128,903 injections observed severe reactions

after first dose in.....0.3% in 45,680

after second dose in.....0.2% in 44,321

after third dose in.....0.1% in 38,902

Muller of Berlin reports 3,010 injections. In only one case temperature reached 102 and was normal next morning. Most cases were observed for weeks; none gave later symptoms. Pain in cicatrized wounds, contusions and pleural thickening frequently occurred. In one case pain developed suddenly after injection, in seat of left sided apical affection of a year previous which had not given pain before. Children can be as safely vaccinated as adults. Russell gives severe reaction at 2 per cent.

Wright's doctrine of a negative phase is of no practical importance. While at first it prevented vaccination during an epidemic, it is now considered of the greatest value in preventing contact cases as shown by the experience of Leishman, Cullinan, Spooner, Ravenel and others.

In an epidemic of typhoid in New London, Iowa, in 1911, which was caused with few exceptions by a contaminated water supply, my son, Dr. F. R. Mehler and myself vaccinated nearly every member of the family and nurses of our

patients in which typhoid occurred, vaccinating about 150 persons. No contact cases developed, while three persons in different families who were not vaccinated, contracted the disease.

While in general an attack of typhoid gives immunity for life, a small percentage given as from one-half to two per cent. have a second attack.

Vaccination cannot be expected to confer an absolute immunity any more than an attack of typhoid, nor can it be expected to protect from massive doses of infection.

The experience with millions of vaccinations in the U. S. Army and Navy, Indian Army, present European War, in cities and hospitals in this country and Europe, leave no doubt of the value of vaccination. Morbidity and mortality is greatly lessened in the small percentage that contract the disease.

For how long does prophylactic vaccination protect, and have we any means enabling us to ascertain its duration? Firth, from his observations in the Indian Army, believes that it will absolutely protect for two to two and one-half years and that a partial immunity may continue for four to five years.

Russell believes that one immunization in infancy, one in childhood, one in youth, and one in adult life ought to give full protection.

While some of the antibody tests and agglutination reactions are of value in diagnosis, they are of uncertain value in ascertaining immunity. A high agglutination reaction affords no assurance of protection against relapse in disease. In those recovering from typhoid, the large majority of which are protected for life, the reaction soon disappears. An agglutination reaction a short time after vaccination will probably ascertain the efficiency of the same.

Of promising value is the work of Gay and Force, of Berkeley, California. They are using typhoidin, a preparation of typhoid bacilli, in all respects similar to Koch's old tuberculin, by a modified Von Pirquet method, using Dorset strain No. 5 U. S. Army for cultivation. The dried alcoholic precipitate from the typhoidin solution is used. A control solution of sterile 5 per cent. glycerin is similarly prepared and evaporated. Two uniform abrasions are made on the arm with a straight edged chisel measuring 2.25 m.m. and tempered to allow sterilization by heat. The inner spot is used for the control, the outer for the typhoidin. The reaction appeared six to twenty-four hours later and is due to combination of antibody and antigen. In a few instances reaction appears in six hours and disappears in twenty-four hours. Occasionally it will persist for a week. An areola of four to twelve m.m.

in diameter in typhoidin spot indicates a positive reaction. In the majority of cases, the control showed a healed area not surrounded by an areola. In negative cases there is absence of reaction in both control and typhoidin spot. In cases showing a positive reaction in typhoidin spot and reaction in control spot, a difference of 2.5 m.m. in favor of typhoidin spot is taken as indicating a positive reaction.

They tested twenty-one cases that had recovered from typhoid, of which twenty gave a positive reaction; two of the cases had typhoid thirty-one and forty-one years ago—a percentage of ninety-five.

In forty-one cases in which the history of typhoid was negative, 85 per cent. gave no reaction.

Fifteen cases that had been vaccinated by U. S. A. method from eight months to four and one-half years previous, nine gave a positive reaction.

Twenty-five individuals who had been vaccinated with the Gay and Claypool vaccine from one to eight months previous, gave a uniform positive reaction.

Six vaccinated with Cutter vaccine twelve and fifteen months and four years previous, all but one, vaccinated twelve months, gave a positive reaction.

Dr. Gay kindly furnished me a quantity of typhoidin and control preparation. The result obtained is similar to that obtained by Gay. In ten normal individuals who gave no history of typhoid, the reaction was negative.

In ten who had typhoid—one fifty, one thirty, one nineteen, one, who had typhoid twice, fifteen and three and one-half years ago, the others three and one-half years ago, all but two (2) who had typhoid three and one-half years ago, gave a positive reaction.

Ten who received but two injections, three and one-half years ago, only one gave a positive reaction.

Twenty who had three injections, three and one-half years ago, thirteen gave a positive and seven a negative reaction.

In conclusion it would be a pleasure to present a clear cut and practical course to pursue, one that gave reasonable promise of success. Some day order will come out of the chaos, but for the present all I can offer is this:

"Let each one of us earnestly teach the laws of typhoid prevention, realizing that this includes not only sterilization of excreta, cleanliness in all manner about food and drink, but a letter to legislators or personal appeal. If we don't insist upon reporting typhoid, upon supplying our health boards power and money now, to our shame, years later, an enlightened public will. If vaccin-

ation is of value, let us give it its place. I believe we have a right to say it is not dangerous, and that it will prove as efficient in civil as in military life, leaves but little doubt."

NON-MALIGNANT DISEASES OF THE PROSTATE*

BEN C. EVERALL, M. D., F. A. C. S., Waterloo

In choosing the subject of non-malignant diseases of the prostate gland, I was not guided by the desire to cover all the subject implies, nor because of any peculiar fitness I feel myself to have in treating diseases of this kind. Neither do I especially like to talk on a subject which presents so many and varied aspects, or where such a wide divergence of opinion exists.

No doubt from the earliest history of man, has disease of the prostate gland existed, and at no time during this period have medical men agreed consistently on even the essential points in the etiology and treatment of these diseases. If I present for discussion a few of the salient points in the diseases of a gland almost unheard of by the laity, and much neglected by the profession, I will be amply rewarded for any criticism I may incur at this time, for I believe in all sincerity that more of the misery, pain, and suffering of the world originate within a radius of two inches on the prostate and prostatic urethra than in any corresponding area of the human body.

It is difficult to conceive that the existence of the race depends largely on the integrity of this gland, and I hope I may be excused from the charge of exaggeration if I say that in far reaching consequences no disease of any other organ has the potentialities for danger to the life and happiness of individuals as the prostate gland. To emphasize the importance for a careful consideration of this gland I would divide the effects of prostatic disease to the individual and to the race at large.

The effects on the individual are divided into local and constitutional. The constitutional manifestations are in the mental, physical and moral traits of the individual. Without at present going into detail we will say that aside from the effects on the individual the greater effects are on persons other than the ones primarily diseased, that is, infection and invalidism of the opposite sex and of the offspring. In a broader sense, a wide sociological field might be opened which it does not serve the purpose of this paper to more than mention.

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I wish merely in a general way to open up a discussion of a few, a very few, of the points in non-malignant prostatic disease, because in considering malignant disease we are not dealing with a subject permitting of palliation or cure, other than the most radical of surgical procedures.

It is most convenient for a short survey of the subject to divide it into *three* divisions in regard to the ages of the individuals.

The first group, or group I, the young adult of from fifteen to thirty years of age.

Group II. Middle age, thirty to fifty years of age.

Group III. Age of decline, fifty onward.

In the first group the inflammatory and infectious diseases occur; the second group the early sequela of previous diseases, we may say that most men at thirty who may have an infection, have had it.

Those included in this group, are the chronic prostatitis, and persons afflicted with stricture and vesiculitis. This group comprises the most dangerous ones to the individual and to society, because in these cases lie the greatest carriers of disease, who without marked inconvenience or suffering to themselves, are, if neglected, the greatest menace to themselves and those about them.

The third group comprises the obstructive cases, the hypertrophies and neoplasms. Tumors being rare in the first two groups are included in the last group, but will receive no further consideration in this paper.

In group I, suffice to say that the gonococci of Neisser is the greatest disturber, and a more successful method of dealing with this disease will obviate the necessity of placing the majority of the uncured cases over in group II.

Infection in these cases of course is through the urethra principally. That acute diseases of the prostate originate at times through the blood stream, is admitted.

In group II is the greatest number of chronic prostatitis, and I am convinced that especially in the larger cities chronic prostatitis offer the greatest number as well as the most poorly handled of the chronic infections.

I believe more misery and general suffering arises as a result of chronic prostatitis than in any other ten infections, of any other organ in the male.

If we admit that 90 per cent. of male adults have had a Neisserian infection at some time during their life, that 85 per cent. of such cases of infection invades the prostate gland and that 75 per cent. of these invasions cause chronic in-

volvement, we may say that this disease alone would seem to prove beyond dispute, that no infection of a single organ produced one-tenth of this total.

I believe most sincerely that of all the producers of modern wear and tear, of mental and nervous exhaustion, worry, pain and neurasthenia, none of them can compare with chronic prostatitis and its end results, that is, premature senility and sterility.

More pitiful is the fact that the original offender is not the greatest sufferer, as the chronic carrier of infection is the cause of 74 per cent. of the sterility and invalidism of the opposite sex and 87 per cent. of the blindness in both sexes, 34 per cent. of the arthritis in both men and women.

In the face of these facts it would be folly to dwell on the necessity of proper treatment of these cases. I believe that the majority of these cases presenting themselves with a mild prostatic irritation or disturbance, causing some discomfort (and they rarely present themselves, except because of pain or discomfort to themselves) are dismissed from the practitioner's office and mind with a bottle of San Metto, or some other highly advertised and equally valuable nostrum, with the advice to come back in a few days if not better.

When if they do return, a bottle of experiment No. 2 is given the patient, and seldom are they examined digitally and more rarely with a urethroscope. The late, bad results of stricture and prostatic fibrosis are attributable to inadequate earlier treatment. If any doubt exists as to the general carelessness in the treatment of chronic prostatic disease, an examination of the offices in which you can find a case of good sounds, free from rust and roughness, and good urethroscope and other accessories, will dispel it. Nor in justice can this delinquency be attributed to the physician, as in no other disease is it harder to get a regular attendance for treatment by the patient.

This is due partially to the disagreeableness of the treatment, and the false delicacy in regard to confiding many of the associated symptoms of prostatic disease. Yet in but few diseases is judicious treatment and a study of each case rewarded by as brilliant results. If there is any virtue in gratitude, commend me to a patient relieved of a long standing obstruction or lost vitality. What will we do with the cases that fall into this group? The symptoms are well known, including as they do, such a variety of manifestations, varying from a slight burning and irritability, frequency, waning of sexual powers,

over excitability, often a slight discharge after unusual exertion or excesses, either from alcohol or otherwise, it is not well to forget the most modern aggravator of prostatic inflammation, the automobile.

One of the most common symptoms of chronic inflammation of the prostate is nervous depression and its attendant evils, disturbed digestion and general feeling of exhaustion, and at times, almost melancholia.

The frequency of urinary disturbances are secondary to swelling or extension of infection to the neck of the bladder. The proper treatment of these cases depends primarily upon a mutual understanding by the doctor and patient alike of the gravity of the case at hand, and of its tendency to chronicity. To know that there is an improvement in the symptoms does not mean a cure.

Of any one procedure of greatest value I believe it would be difficult to choose between two, the sound and autogenous vaccine. The reason why, in my opinion, the sound is so often a failure is because of the unfamiliarity with its proper use by a large number of users. They are rough and careless, so that the pain and after results are so uncomfortable to the patient that he refuses to submit to a repetition of this form of torture, and of course the doctor fails to see any progress in the cure of the disease. I believe that once in seven days is sufficient to pass a sound, and very great caution in advancing the sizes is of the most vital importance.

If passed oftener, the healing is not complete, the patient suffers pain and the disease is aggravated. Another point—too few use a local anesthetic in passing a sound, and for the reason already given, the treatment is discontinued before it is well started because of the pain. There is no reason in my mind why a patient should suffer from dilating with a sound or with a Killman dilator (by the way, a most valuable instrument) than in removing a tonsil, or in performing any other minor operation.

The use of a solid ointment or lubricant is depreciated. I prefer to fill the urethra comfortably full of a liquid alboline combined with antiseptics such as phenol, together with some local anesthetic, a mixture of glycerin, tragacanth, alyphin, and phenol acts beautifully at times. If the pain of passing the sound lasts over one day, too large a sound has been used, and a smaller one should be selected, or the same one passed twice. The shortest cut to a cure will be a slow advancement.

A course of sounds which aims at less than the size of a thirty-six French to finish with will be inadequate. As to the autogenous vaccine, if

those of you who have never tried this form of treatment, do so on your next case of chronic prostatitis, you have one of the real pleasant surprises of your practice awaiting you. A case which seems to have resisted all forms of treatment may clear up apparently with one treatment and the general condition improve remarkably, and if the vaccine is properly made from the fluid massaged from the prostate, the percentage of failures to improve will be small.

It is a great mistake to employ a laboratory to make the vaccine in which you have not the strictest confidence. Other local measures consist of massage through the rectum, and when it is remembered that the prostate is a living sponge, and to empty it by any means is a tedious task, it would seem from its histology that massage would be incapable of emptying all the tubules, yet the improvement by the changes in circulation and the partial removal of irritating contents causes a great improvement.

Because of complexity of the structure of the prostate, the late Dr. Alexander, of New York, advocated and practiced a removal of the infected prostates in young men. I have seen a boy of nineteen on whom he had done prostatectomy. I scarcely think any great number of surgeons advocate this line of treatment.

The application of silver nitrate, one-half to 10 per cent., with hydrastis, in many cases of enlarged verumontanum and irritable prostate, exert a remarkably favorable influence. Hot and cold sitz baths are very comforting, but their real value is exaggerated.

In consideration of Group III very briefly, the hypertrophies are not caused, or are not the terminal changes of a previous prostatitis, unless the prostatitis consists of a low grade, unrecognized inflammation, not commonly known as a prostatitis. Statistics prove that the hypertrophies are commonest in men who are the least subject to venereal disease and infections, as in farmers.

There are to my mind several reasons why hypertrophy does not follow other infections, as in gonorrhœa, is because primarily in other acute infectious diseases there is a destruction and loss of tissue, which makes an hypertrophy less liable to occur, but the real reason, may be away off, as I have never heard it mentioned, previous infections may have been treated by exactly the same means that we would employ in a beginning hypertrophy, that is, by dilating, massage, high frequency, or galvanic currents, or various electrical applications, and for this reason the symptoms of hypertrophy are not manifested.

In true prostatic hypertrophy, patients do not

present themselves early for treatment as they wait for obstructions to appear before consulting a physician. The early symptoms are a lost, or fading sexual vitality, neurasthenia, depression and melancholia, waning mental brilliance and physical snap.

The late symptoms of obstruction make the treatment imperative. When at this stage, palliation or prevention must give way to radical surgery. A slight urinary frequency may exist for years, and give its warning in vain. A man of forty-five to fifty-five who has a daily or a nocturnal frequency, that is, over seven urinations during the day, or at all during the night, together with a slight ache in the thighs and back, a slight burning in the bottoms of the feet, together with a nervous irritability, and with a tendency to fatigue easily, together with a loss of concentration, and allows these signs to go unheeded, tampers with his prospects of a happy, useful old age, for in the earliest stages, I am sure from observation that the terminals can be checked or cured.

Osler's dictum that a man is as old as his arteries, might be supplemented by another that a man feels as old as his prostate is.

What is the procedure of most benefit in these cases seen early? Extreme gradual dilatation, the high frequency or galvanic current with massage, hygienic measures and exercise. The latent cases are surgical, but the mortality has been tremendously lowered by cleaning up the low grade infections of the bladder and kidney pelvis, before operations, assisted by vaccines, proper drainage and cleansing of the bladder. The deaths, post-operative, are not due as previously believed, to uremia from failure of kidney functions, but to a general lowered vitality and a pre-existing infection which was not cleared up before operation.

Discussion

C. F. Wahrer, Fort Madison—When a case is called in court and tried, the decision is rendered according to the fortunes of the case. But when one side does not appear, then judgment is rendered by default, usually. Now, in many of these cases of prostatitis the other side does not appear, when they go by default until all the attendant evils following prostatitis ensue. Sometimes treatment is not effective through want of proper diagnosis, now

and then the condition is correctly diagnosed and wrong treatment given. We will then soon have cystitis, pyelitis, by backing up of infection, supuration, etc., when the end is not far off. In these days of libraries and medical societies there is no excuse for any man not availing himself of the best methods of treating a case of prostatitis, and when in a short time he finds the end of a catheter staring him in the face he had better look out. For when catheterization begins to relieve the ensuing cystitis—I say when it begins—then the end of that patient is in sight.

I want to make the plea, as fervently as I may, that when a doctor finds himself in charge of such a case, that he call in the best surgeon available, and get his judgment in this case in the present light of statistics, then free that man forever from his incubus of a prostate. When we remember that the extreme mortality of prostatic operation does not exceed 4 per cent., and I believe the surgeons present here will bear me out,—less than measles, less than whooping cough,—we can readily see that these men who under such conditions can look forward to nothing but trouble for the balance of life, can soon be put in the way of happiness and an agreeable old age, when placed in the hands of a successful, conscientious, and skillful surgeon, where these cases belong. This is the newer and better view of these prostatic cases, and that they be operated on early, for that makes for safety.

Dr. Everall—I would simply say to Dr. Wahrer that if the general practitioner would take proper care of these cases when he first sees them instead of merely sending them on without any treatment or examination or any satisfaction whatever, then these conditions could be cured with less trouble than with prostatectomy. Prostatectomy is a life-saving operation and should be recognized as such. The conditions leading up to prostatitis are amenable to therapeutic treatment, and those are the cases the general practitioner sees. The surgeon does not see them early, and you will cut off a great deal of the surgeon's revenue if you treat these cases early.

In the early-late cases, where the condition has not gone on to degeneration of the pelvis of the kidney, clean the bladder up and dilate the prostate carefully. And therein lies the greatest trouble with the average man—he is not careful or sterile. This is the easiest part of the body into which to introduce infection. The physician should be kind to these cases and treat them properly, for if he causes unnecessary suffering the patient will not come back.

SYMPTOMS OF SURGICAL CONDITIONS
OF THE GALL BLADDER*

W. A. ROHLF, M. D., F. A. C. S., Waverly

"Doctor, I question your diagnosis of gall-bladder disease, because this case has not now and never has had jaundice." We have met with this statement on various occasions, indicating that the laity and at least a few physicians are misled as to the significance of jaundice in gall-bladder disease.

I want at this time to make the positive statement, that in *uncomplicated* gall-bladder infection or disease, jaundice is *never* present. When jaundice is present it speaks for complications.

Stones confined in the gall-bladder or cystic duct do not cause jaundice. Jaundice is absent even in common duct stones in 15 to 50 per cent. of the cases. In abscess of the gall-bladder that ruptures into the liver tissue, jaundice will occur. Malignant disease involving liver tissue produces jaundice which never recedes.

Pancreatic malignancy, with its greenish yellow jaundice, never receding, we have all seen. Portal vein infection, abscess of liver, embolic or otherwise, may produce jaundice. Trauma from operative work on gall-bladder and ducts producing stricture, temporary or permanent, will cause jaundice. Adhesions from pericholecystitis, induced by trauma, or infections from a typhoid or other source, may cause stricture and bile obstruction, here congenital stenosis may be mentioned.

There are other conditions that may produce jaundice, but I wish to make the point that whatever conditions may produce jaundice, they are never limited to the gall-bladder or cystic duct.

Gall-stones in the gall-bladder or cystic duct may be present without any special symptoms. A large per cent. (probably about 30 per cent.), are never suspected but remain quiet and never produce symptoms. The X-ray shows only a limited number of them. Perhaps this is a fortunate fact.

Positive diagnosis is made by direct palpation, not often possible by their presence in vomit or stool, or appearance in fistulous openings. Gall-stones are suspected by what is almost a characteristic colic. This colic pain is terrific, more or less spasmodic, of sudden onset and sudden disappearance. Vomiting occurs during the attack and usually gives relief from the paroxysms of agony. A cold perspiration due to the suffering, covers the victim's body. The pain radiates

toward the back, downwards, upwards, and sometimes seems to radiate in all directions at once.

In gall-bladder or cystic duct stone, the pain is most likely to be along the right costal border, and to the right of the subscapular region. When in the hepatic or common duct the pain is more commonly central and toward mid-subscapular region. These gall-stone and colic attacks are without fever, unless infection is present. Fever in these cases spells infection. The duration of the attack varies from a moment (stitch in the side) to days.

Should the stone or stones be driven into the cystic duct they may by pressure interfere with free circulation in the gall-bladder resulting in edema and necrosis, or at least lowering the vitality so that the tissues are very liable to infection. Some of these go to necrosis, gangrene, perforation, peritonitis and death.

May I here inject the remark that gall-stones that produce symptoms should be removed to prevent dangerous complication.

Continued irritation invites cancer—severe infections, ulcerations into duodenum producing serious adhesions, these in turn resulting in intestinal and bile duct obstruction and even forming enteroliths sufficient in size to occlude the small gut.

We have all operated for gall-stones and found only adhesions kinking the ducts, making a colic characteristic of gall-stone colic. Our patients were cured—but our diagnosis a justifiable mistake.

Acute cholecystitis is not always easy of diagnosis. We expect severe pain in gall-bladder region, chill or chills followed by fever, nausea, and vomiting, tympany pronounced, jaundice only where other structures are involved, the other bile ducts, liver infection, etc. The severity of the pain does not determine the virulence of the infection, a necrotic gall-bladder, especially in advanced life may produce only slight fever and not a very rapid pulse. The temperature should be taken by rectum—this is a very important point. A serous cholecystitis may in the beginning produce as much pain, fever, increased pulse rate, prostration, nausea, vomiting, as the purulent form, but these conditions will not continue longer than twenty-four to seventy-two hours. Again the necrotic gangrenous form may begin with less stormy symptoms, and because of this the patient may be lost, since the true condition is overlooked until too late.

The previous history as to typhoid and other infections will be borne in mind. Appendicitis and acute cholecystitis may be for a time con-

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fused. Of course, a palpable gall-bladder would clear this up.

"Fist percussion" as practiced and taught by Dr. Murphy here surely has an important role, and much reliance can be placed on this investigation, in the presence of a gall-bladder distention. This distention, we are told by Crile, is the main cause of the pain.

The symptoms from perforation of the gall-bladder will not differ much, if at all, from perforation of duodenum, stomach, appendix, except that after a few days, absorption of bile might produce jaundice.

May I here urge radical treatment early in acute cholecystitis whether of serous or purulent kind. First because it will save some cases from speedy death, and second, that even one attack will in all probability lead to a condition of chronic infection and inflammation, and its various train of symptoms and distress.

Chronic cholecystitis is not always easy of diagnosis and perhaps sometimes even impossible. We are familiar with the symptoms of vague pain, often increased on taking food, belching of gas, frequent nausea, and even vomiting, slight fever, following a mild chill, (mild infection) coated tongue, general malaise, feeling of fullness about epigastric region, tumor in gall-bladder occasionally present, and here,—unless distention is present,—the fist percussion fails. The case has even lost weight, many develop neurotic conditions. Constipation varied with diarrhea. The liver may or may not be enlarged, and here care is needed as adhesions may increase the area of liver dullness.

In cases of well marked gall-bladder distention, the diagnosis is very much simplified and should be easy. That this sort of picture and train of symptoms with some of them absent should lead to error is not unusual as the stomach symptoms are so predominant. However, by excluding duodenal and stomach disease through laboratory tests, finding stomach secretions normal, no blood in stomach washings or stools, normal motility, etc., we may arrive at a correct diagnosis of cholecystitis.

Finally when all these precautions have been taken we all know that mistakes in diagnosis are still made. We are safe in the statement that gastric symptoms not characteristic of duodenal or gastric ulcer, point with suspicion to gall-bladder disturbance.

Gunshot or perforation wounds of the gall-bladder have no special symptoms to indicate the conditions, only an operation, in the presence of tense rigid abdomen, will disclose the condition.

In this short discussion I have tried only to

bring out what seemed to me a few important facts, among these that:

Jaundice is never present in uncomplicated gall-bladder infection, or other surgical conditions limited to the gall-bladder or cystic duct.

That severe symptoms from acute gall-bladder infection may indicate only a mild form of infection not immediately dangerous.

That especially in elderly people, but not limited to them, *mild* gall-bladder symptoms may result from a terrific necrotic or gangrenous form of infection, and death result without early operative interference.

That gall-stones in the gall-bladder producing symptoms are dangerous and should be removed.

That in chronic gall-bladder infection, with pronounced stomach symptoms, extreme care in diagnosis is necessary, but that with every precaution mistakes will occur.

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GASTRORRHAGIA*

T. A. MORAN, M. D., Melrose

Gastrorrhagia, or gastric hemorrhage, is bleeding from the mucous membrane or walls of the stomach, the blood entering the stomach is expelled either by hematemesis or by tarry evacuations from the bowels called melena.

Hematemesis and gastrorrhagia are sometimes, though erroneously, used as synonymous terms.

A clear distinction, however, should be made between the two. Hematemesis, or vomiting of blood, is a symptom of pathology, which may, or may not, exist in the stomach. For example, the hemorrhage may take place from the nose or throat, or a profuse hemorrhage from the lungs, the patient swallowing the blood and later on vomiting it. While in gastrorrhagia the hemorhagic point is always in the stomach, hematemesis does not always necessarily follow; as the blood may be expelled by the bowels or by both mouth and anus, or by mouth alone.

The stomach receives its principal blood supply from the gastro epiploica dextra, the gastro-epiploica sinistra and the vasa brevía, a branch of the splenic artery.

The arteriols break up at the base of the gastric tubules into a meshwork of fine capillaries which surround the tubules forming an anastomosis with each other and ending in a plexus of larger capillaries, which surround the mouths of the tubules and also form meshes around the

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alveoli. The blood vessels ramify in the sub-mucous coat and are distributed to the mucous and muscular layers of the stomach wall.

Ulcers and malignant tumors are said to be the most common causes of gastric hemorrhage. Direct injuries to the mucous membrane, as swallowing glass, fish-bones, or other foreign bodies, any interference with the blood supply, as tumors or cirrhosis of the liver, diseases of the heart or lungs, blows or falls upon the epigastrium, syphilis, thrombosis, varicosities and aneurysms of the gastric vessels are mentioned as either direct or indirect causes.

The chief symptoms of gastrorrhagia are hematemesis and melena, and upon these two alone, where they occur together, a diagnosis can usually, but not always, be made. Care, however, should be exercised in excluding other conditions that might produce the same symptoms. The bleeding may occur from the posterior nasal fossa, the blood trickling down the throat into the stomach or it may be from abrasions of the esophagus or a ruptured vessel in the throat—the blood passing into the stomach and in a few hours vomited or passed per anum.

The patient's previous history with reference to symptoms of gastric ulcer or malignancy, injuries to the epigastrium, diseases of the heart or liver, will often aid in arriving at a correct diagnosis. However a previous history of stomach trouble may be entirely absent and severe hematemesis and melena be the initial symptom.

The following is the history of a fatal case that occurred in my own practice in July of last year.

Mr. O., age thirty-four. Married. Family history. Mother living and in good health. The father died two years ago following an operation on the throat. Two brothers and three sisters living and in good health.

Personal History—Had the usual diseases of childhood; had typhoid fever in 1910; made a good recovery; no complications; no sequels. When twelve years of age was thrown from a bicycle, the handle striking him in the epigastrium. He had three very severe hemorrhages from the stomach, vomiting between a pint and a quart of blood at a time; had no stomach trouble of consequence since then; no vomiting or pain. Had attacks of bronchial asthma. Two years ago nearly bled to death after having a tooth extracted. The doctor told him "his blood would not clot." Present illness began July 15, 1914. Patient had been working in the harvest field, riding a binder for several days previous. He had drunk a great deal of water and lemonade. Complained some of abdominal pain the day before but that passed away in the evening and he retired feeling as well as usual. He was restless, however, tossing from side to side in the bed; could not sleep, but

attributed this to being nervous from the previous hard day's work.

About 2 A. M. he got out of bed and went to the kitchen to get a drink of water, where he fell in a faint on the floor.

His wife said his lips were extremely pale—a cold clammy sweat bathed his hands and face; he was extremely weak and prostrate. He was carried back to bed. I saw him an hour later at which time he was much improved. His lips had regained their color; he had not vomited and his bowels had moved, but the character of the stool was not detected until the next morning. Nothing about his condition seemed to suggest an internal hemorrhage. I gave him a hypodermic of 1/60 gr. strichnine and left him, as I supposed, in fair condition. His wife called me by phone at 6 o'clock stating that he had vomited a wash-basin full of black material. I hurried again to his bedside and found him extremely prostrate; pulse 120; feeble, mucous surfaces bleached, bathed in a cold, clammy perspiration and marked air hunger.

I was shown the vessel in which he vomited which contained about three pints of blood and undigested food, pieces of orange, fried potatoes, string beans, all swallowed without being masticated, a few of the articles of diet he had partaken of the day previous. He was also passing blood per anum. I gave him 1/8 gr. morphine and had cold compresses applied over abdomen. He rallied again in about an hour; the color came back to his lips; pulse seemed better.

Two physicians were called in consultation and arrived at 9 A. M. and before the second vomiting spell, which took place at 11 A. M.

It was decided at the conference to give him morphine hypodermatically. Nothing was to be given by mouth. Proctoclysis by the drop method, absolute quiet and hypodermics of coagulose, cold compresses over abdomen. This was about the line of treatment decided upon and carried out.

He rested fairly well from 7 to 11 A. M. when he vomited again a quantity estimated at 1½ pints of blood, again at 1 P. M. 1½ pints, again at 4 P. M. about the same quantity. I gave two ampules of coagulose at this time, not being able to get it sooner, being eight miles in the country. He vomited again at 7 P. M. 1½ pints, again at 9 P. M. about one oz. July 16th, 1 A. M. vomited a pint; some clotted blood; 5 A. M. about a teacupful, 9 A. M. about twenty oz. This was the last hemorrhage. He became unconscious after this and died at 3:30 P. M. The nurse estimated that he had lost between seven and eight pints of blood in thirty-six hours. Operative procedure was discussed at the conference but thought not to be advisable on account of previous history of bleeding after tooth had been extracted, when he said he nearly bled to death.

Tr. ferris chloride in ten drop doses well diluted with water every two hours was given the evening of the first day of the hemorrhage. But nothing

that was done appeared to be of the least service. He continued to have hemorrhage after hemorrhage until the end came the evening of the second day.

Gastric hemorrhage of sufficient severity to cause death is rare. It may even be so slight as to cause little or no inconvenience to the patient—in fact, he may not be aware of its existence until so informed by his medical attendant after a chemical analysis of stomach contents or of stool for occult blood has been made. On the other hand, it may be one of the most formidable and alarming conditions with which we have to deal; taxing the skill and resourcefulness of the medical attendant to the utmost, and occasionally terminating in the death of the patient, in spite of any treatment he may apply. It is this class of cases that require our most careful study.

The natural tendency of hemorrhage in any part of the body is to be self limited. That is, the body to a certain degree, possesses within itself, the properties controlling hemorrhages, without any artificial aid. The blood possesses the property of coagulation,—normally—forming a thrombus which plugs the bleeding artery or vein and effectually stops further hemorrhage.

All that the bleeding vessel demands is that it be left alone, and it will take care of itself, but this happy condition does not always prevail in every case of hemorrhage. In some cases the blood refuses to form a clot or plug, until aided by artificial means, either on account of the size of the bleeding vessel or on account of some peculiar dyscrasia of the blood. The hemorrhage will continue unless stopped by artificial means. It is in this class of cases our skill as physicians is called upon. Mild, uncomplicated cases, and even moderately severe, uncomplicated cases, of gastric hemorrhage, requires no treatment except perhaps rest in bed, but severe cases, the cases that will bleed to death, without the aid of a physician (and sometimes unfortunately with the aid of one) are the ones in which we as physicians are particularly interested.

The treatment of gastric hemorrhage varies with the author writing upon the subject. Every author has his favorite method of treatment.

There is no specific.

A gastric tampon in the way of a thin walled inflatable rubber bag, that could be inflated after it was introduced into the stomach, would be the ideal method of controlling hemorrhage, but on account of the location of the stomach, its thin walls, danger of rupturing malignant tumors and ulcers, this method could hardly be deemed practical.

I will quote a few of the methods of treatment advocated by different authors.

Kemp in his work on diseases of the stomach and intestines gives morphine $\frac{1}{4}$ gr. hypodermically. Locally, ice bag over the epigastrium. Ergot $\frac{1}{4}$ drachm hypodermically. Two drachms to 1 oz. of a ten per cent. solution of gelatine by mouth and advises the use of ice waters—lavage in rare instances. Also he recommends the use of adrenalin chloride 1:—1000:—and stimulants as strychnine and camphorated oil if deemed necessary.

Dieulafoy says: In my opinion the patient should take absolutely nothing by mouth, not even a teaspoonful of water—not a morsel of ice. I reject gelatine and hemostatic draughts. All medication to be carried out hypodermatically or per rectum.

Artificial serum should be given sub-cutaneously notwithstanding the objection that it might interfere with the process of coagulation in the vessels by raising the arterial tension. Experience proves that careful injections of serum, are of service but operative procedure should not be delayed too long.

Osler advises that the patient be put under the influence of opium as rapidly as possible—no attempt should be made to check hemorrhage by administering remedies per mouth. It is doubtful if lead, gallic or tannic acid have the slightest influence. The essential point is to give rest, which is best obtained by opium. Nothing should be given by mouth except small quantities of ice. The extremities may be tightly bandaged. Direct transfusion or sub-cutaneous saline solution may be necessary.

Strumpell advises that patient lie as quietly as he can with a flat ice bag on the epigastrium. In persistent cases, small doses of opium or morphine are given. Also sub-cutaneous injections of ergotine or cornutine, or by mouth acetate of lead or chloride of iron.

"Lindberg tabulates the details of sixty-eight cases of gastric ulcer—five died. These sixty-eight cases were encountered at Fabers Clinic, Copenhagen. Among 550 patients, with ulceration of the stomach, all of the sixty-eight cases were given conservative treatment alone; and in the five fatal cases necropsy showed that conditions could not have been remedied by operation. Comparison of all this material with the operative cases on record from other clinics has convinced Lindberg that surgical measures are never indicated in cases of acute hemorrhage from the stomach or adjacent bowel. On the other hand, recurring hemorrhages, especially when the anemia keeps up during the intervals, require operative treatment and should not be delayed too long.

Stimulants and saline infusions increase the tendency to hemorrhage. The foot of the bed should be raised, but morphine should not be given, not even where there is painful spasm of the pylorus. A sub-cutaneous injection of 400 c.c. of 10 per cent solution of gelatine can be given daily, and Lindberg has been very favorably impressed with the efficacy of rinsing out the stomach with one per cent. solution of ferric chloride. He pours 100 gm. of this into the stomach through a soft stomach tube, then pumps it out again after a few minutes. This is repeated until the fluid comes away clear, which is generally the case after four or five rinsings. Along with this he injects gelatine.

The French surgeon, LeJars, says in case of the first hematemesis, even though considerable, keep the patient quietly in bed on his back with the head low and the lower extremities raised on pillows. Give him absolutely nothing by the mouth. Keep an ice bag constantly applied to the epigastrium. Have rectal injections of water that has been boiled, with the addition of a drachm of phosphate of soda to each, administered two or three times daily at a temperature of 120 F. and above all, employ very large quantities of saline solution given subcutaneously and if necessary in the veins.

A good deal may be expected from this method if properly carried out, and immediate laparotomy is only indicated under very exceptional conditions.

That operative procedure has a very high mortality is shown from the following reports. Hartman estimates it at 63 per cent. Tuffier in a collection of fifty-two cases reports a mortality of 37 per cent.

In making a brief review of the evidence presented it would seem that all are agreed upon absolute rest in bed as essential. Three of the authorities quoted, advise the use of morphine, hypodermically, and one even to the point of narcosis.

Kemp gives gelatine 5 to 10 per cent. solutions every half hour for ten to twelve hours in one or two teaspoonful doses, but says that chloride of iron and acetate of lead are objectionable. He also recommends gelatine hypodermatically. One author recommends washing out the stomach with one per cent. solution Tr. ferric chloride, while another says "that lavage with ice water may be of service." One uses hemostatic draughts in the way of chloride of lime and acetate of lead. Three of the authors quoted advise absolutely nothing by mouth, all medication to be given hypodermatically. Two of the authors mention ergot to be given in some form.

Two of them advise gelatine solution, hypodermatically. Osler, Dieulafoy and LeJars and Kemp advise artificial serum infusions either subcutaneously or by veins, while Lindberg rejects the use of artificial serum as he does also the use of opium in any form, but he gives no reason for his objection to their use.

From the foregoing the following deductions are made:

1. That absolute rest in bed is essential.
2. That absolutely nothing should be given by mouth.
3. That the use of styptics and hemostatic draughts are injurious rather than beneficial, and should not be given.
4. That the ice bag on the epigastrium may be of service, and yet it would seem to me that it would have a tendency to drive the blood centrally, increasing the internal congestion and thereby promoting rather than retarding gastric hemorrhage.
5. That saline infusions or artificial serum should be used in every case, either by vein or sub-cutaneously. Proctoclysis is slow, uncertain, and not to be depended upon. Kemp on one occasion in an emergency, needled a superficial vein with a hypodermic needle and infused by this method.
6. That morphine used conservatively is good treatment, and lastly,

That operative procedure is not a simple benign undertaking. That the mortality is high, but if deemed advisable, should not be delayed too long.

Discussion

J. F. Herrick, Ottumwa—I do not rise because I have anything special to add to this subject except possibly to emphasize one particular feature, and that is the difficulty, in a case of gastrorrhagia where you have no definite history, in determining on your course of treatment. If you know that the gastric hemorrhage comes from an open ulcer, if anything is to be done for continuous hemorrhage it is surgical. But, on the other hand, a case of exhaustion following hemorrhage is not a good surgical risk. And, taking everything into consideration, the probabilities are that more such patients will live if left alone as far as surgery is concerned, and treated, as the essayist has said, by rest and plenty of morphia. And I would give a half grain or more of morphia and put the patient absolutely at rest. Three-fourths of a grain will not kill the average patient, but one-half grain will usually quiet these cases. By this means we not only have quieted the pain, but have obtunded the sensibilities, the entire body, so that there will be not only physical, but mental rest. If that is done and cold applied over the abdomen, you have done practically all that you can do immediately except possibly by the use of

serum. This treatment is, of course, of recent development, and will act only in those cases in which the hemorrhage is due to some dyscrasia. It would not stop an open blood-vessel, in fact nothing but nature will stop that, and unless such help is forthcoming there is nothing to do but see the patient die.

These cases are not common. Of course, we see hemorrhage due to cirrhosis, from heart disease, and various conditions of the kind, but these cases are of different nature altogether from that included in the title of the paper. I have seen but four or five gastric hemorrhages, all due to some other condition, and yet I have thought over the whole ground and my treatment would be just as outlined by the essayist. But I think I should give more morphia and provide for more complete rest, thereby furnishing a better chance for ultimate recovery.

E. F. Talbott, Grinnell—I recently had an experience with a case of gastric hemorrhage in a child of five years of age, who had repeated hemorrhages covering a period of a week. The child was almost exsanguinated, was very pale, and I felt sure would die. We tried serum, ice, opiates, and various things, but these seemed to be of no value in the case. I myself had been troubled with pyorrhea and had used emetin for hemorrhage of the gums, finding that it stopped the hemorrhage very promptly. So as a last resort I used one-half grain doses of emetin in this case. There was no more hemorrhage after the first dose of emetin, and the child recovered.

L. W. Littig, Davenport—I simply wish to endorse the treatment of gastric hemorrhage. I remember very distinctly three or four cases of hemorrhage so severe that I did not even turn the patients over for examination, and did not palpate the abdomen. So much evidence of hemorrhage was obtainable from stool and general appearance that these patients were left absolutely alone, and they all recovered. Under no circumstances would I think it advisable to do a surgical operation. Surprising as it may seem, in each of these cases I was called to do a surgical operation, I was prepared for this, but did not unpack my "kit," and the patient recovered.

Frank M. Fuller, Keokuk—I did not expect to say anything until Dr. Littig made his little speech. I think we get benefit out of these meetings by giving the experiences we have had. Dr. Littig feels quite satisfied that those patients got well by letting them alone. I haven't any doubt they did. This, however, is no reflection upon Dr. Littig, for they probably would have recovered just as well by any one letting them alone. Some little time ago I was called to see a case in which I am well satisfied that if the case had been operated at the time of the hemorrhage (and these cases are not easy to recognize) if there could have been a recognition of the condition that existed at that time and the patient had been operated on—the patient's life would have been saved. The operation was performed, but too late.

These cases are, as Dr. Herrick has said, most difficult to consider what may be the underlying conditions. When called to see these cases I do not be-

lieve there should be any doubt in regard to there being a hemorrhage. We see the blood, we recognize the condition of the patient, but I do believe that that which will emphasize the condition with which we have to deal more than anything else is a careful, detailed, intelligent elicitation of the history of that case. If these cases are of an ulcerous character, then we can almost always get from the patient a history that will at least suggest a plausible possibility of correct diagnosis. And while sometimes we may feel that these cases are better to be let alone, and probably all of us who have had experience with cases of this character have let them alone in many instances because we have been afraid to do anything else, yet I believe we ought not to let them alone simply because we are inert, but we ought to let them alone if we come to an intelligent conclusion that they should be let alone, and we should promptly and radically act if we come to the conclusion that the history of the case suggests a condition that can be relieved by radical operation.

William E. Sanders, Des Moines—There are two very suggestive features in the history of this case. The patient gives first a history of bronchial asthma, second, a history of pronounced hemorrhage following the extraction of a tooth. These two features in the clinical history would seem to indicate that there was some dyscrasia in the blood as the foundation of this repeated hemorrhage. I was unable to get the details, but it would seem the treatment should be that indicated for hemophilia, which is largely serums and the calcium salts. The calcium chlorid can be given intravenously, the serums can be given subcutaneously or intravenously, they should be given in large amounts, and if we have not available human serum or guinea pig serum or patient's serum, we have always available the antitoxins. The presence of these antitoxins does not in the least invalidate the serum as a hemostatic. Therefore it is well to bear in mind that under these conditions we always have available the standard antitoxins.

M. A. Tinley, Council Bluffs—I want to ask why, in this case of hemorrhage, the stimulant strychnia was used.

W. L. Bierring, Des Moines—I would like to ask the essayist to tell us, in closing, whether an autopsy was held in this case. In the absence of autopsy, one could venture the guess that it was a case of chronic ulcer accompanied by uncontrollable and fatal bleeding.

Since the essayist referred to gastric hemorrhage in general, I wish to refer to two instances of peculiar bleeding which occurred in cases of acute infection, both in young people. They were of the type that might be designated as acute rheumatic infection, beginning with sore throat, followed by multiple arthritis. In each instance the initial and alarming symptom was severe gastric hemorrhage, which in the one case was repeated once and nearly proved fatal. Both patients finally recovered.

In the treatment of gastric hemorrhage, particular consideration should be given to the underlying con-

dition. In all instances of toxic origin, infection, hemophilia, and purpuric conditions, operative treatment rarely is indicated. In these cases rest, as has been outlined, with the use of various forms of sera, may possibly be of benefit. In cases of hemorrhage from ulcer which do not respond within a reasonable time to complete rest, abstinence from all food, and ordinarily local applications, surgical treatment should be considered.

Dr. Moran—A case of hemorrhage from any part of the body is always interesting. And, no matter whether from the lungs, uterus, stomach, or where not, it is alarming—alarming to the patient and alarming to the family. Therefore it behooves us to know what to do and what not to do when called upon in those cases.

Answering Dr. Bierring's question, autopsy was not granted.

The reason a stimulant was administered was that the patient's wife forgot to tell me, when I made the first call, that his bowels had moved, my attention was not called to it, and I was unable to determine from the symptoms that he was having an internal hemorrhage. When I saw him the lips were not blanched, and I thought the condition was simply syncope, the cause of which I was unable to determine. Therefore I was not able to make a diagnosis at that time, but the next morning there was no difficulty in making a diagnosis.

THE SURGERY OF GASTRIC ULCER*

VAN BUREN KNOTT, M. D., Sioux City

Gastric and duodenal ulcers, presenting as they do, many problems in common, will, for convenience, be jointly considered under the above title.

As the literature upon the subject has assumed vast proportions, the time allotted this paper prevents an effort to review it. Despite the fact that so much has been said and written upon the subject of ulcer of the stomach, it is the too frequently repeated observation of surgeons of experience that many of these cases are being sadly neglected because of faulty diagnosis, improper and insufficient treatment, or both. Time will not permit us to consider gastric ulcer in all of its details, etiology, pathology, symptomatology, diagnosis and treatment, hence we must practically confine ourselves to the consideration of its surgical treatment. A few general remarks concerning the subject may, however, be permitted. While the etiology of ulcer has not been definitely established, the writer inclines to the theory which attributes it to thrombosis with death of tissue and its digestion following the cutting off of blood supply to the area involved.

The symptoms of ulcer of the stomach have

been described time and again in great detail, and are now well known and understood. In the vast majority of cases they are typical, and careful consideration should usually result in their proper interpretation. Though the books dealing with diseases of the stomach have been rewritten several times during the past few years and are still being revised, one may still find much upon their pages which tends to befog and mislead the person of limited experience in his efforts to properly identify and classify certain stomach symptoms. Therefore, we still find many who treat "indigestion," which term like *la grippe* covers a multitude of diagnostic errors and shortcomings, with any old, so-called, digestive ferment, thoroughly satisfied that their diagnosis is complete.

The most important factor in the diagnosis of ulcer of the stomach is the history as given by the patient. Careful consideration of this will in the majority of instances lead to correct diagnosis. Next in importance is the physical examination. Next in value is the laboratory findings: quality and quantity of juices, presence or absence of blood, etc., and last in importance the X-ray findings.

I do not wish to be understood as deprecating the use of the X-ray and laboratory methods in the effort to diagnose an ulcer of the stomach or duodenum, as I believe we should take advantage of every diagnostic aid at our command, and that they should be employed in every instance where such disease is suspected. I do, however, deprecate the tendency, becoming more and more manifest, to attach the greater importance to the laboratory and X-ray findings and the lesser to those furnished by history and careful, complete physical examination. In my own experience many more errors in diagnosis can be charged to the laboratory than to the bedside in the class of cases under discussion, and I am sure that the crowding aside of the latter methods of diagnosis by the former, will in many instances prove disastrous.

For practical consideration gastric ulcers may be divided into two classes, acute and chronic.

It is my belief that every acute ulcer of the stomach or duodenum should be treated medically along well established scientific lines for six months. If at the end of this period the symptoms have not practically disappeared, the condition should be considered as a surgical one and so treated.

Every case of chronic ulcer of the stomach is a surgical case and should be so treated unless definite contra-indications to surgical procedures in general are present. The tissue changes surrounding and included in a chronic ulcer, may as

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a rule be considered permanent and may only be removed by surgical intervention. The well known tendency of carcinoma to become implanted upon a chronic ulcer base, is of itself sufficient reason for the belief that chronic ulcer of the stomach should be treated radically. Most patients with ulcer have more or less severe pain, marked by remissions, it is true, but nevertheless frequently so persistent and extreme as to cause the sufferer to demand permanent relief. Loss of weight and strength due to faulty nutrition, persistent loss of blood, perforation, cicatricial contraction of the stomach wall in the ulcer area, and adhesions of the stomach to a neighboring viscus or the abdominal wall, all indicate surgical intervention.

We come now to a consideration of the various surgical procedures which may be utilized for the relief of patients suffering from ulcer of the stomach or duodenum or its complications.

The ideal surgical treatment of ulcer consists in its excision. Unfortunately many ulcers are so situated as to render their excision unsafe or out of the question. Ulcers situated at or near the pylorus, along the lesser curvature or on the anterior wall of the stomach, are as a rule readily excised. Ulcers upon the posterior wall and non-adherent, may be excised by a trans-gastric operation, i.e., widely opening the anterior stomach wall and approaching the ulcer through the stomach cavity. The defect left in the posterior wall may be sutured through the anterior opening without great difficulty if favorably located. A free incision through the anterior wall of the stomach may be made with practically no increase of danger to the patient, and is often of the greatest value in locating and properly dealing with an ulcer or ulcers which cannot be satisfactorily located by palpation alone. Whenever possible, then the ulcer or ulcers should be excised and the defect in the stomach wall properly closed. If such closure results in a narrowing or constriction of the pylorus or duodenum, a posterior gastro-enterostomy should be made. If the ulcer cannot be excised, a posterior gastro-enterostomy should be made.

Gastro-enterostomy is a most valuable and satisfactory method of treatment in many cases of gastric and duodenal ulcer, but has been brought more or less into disrepute because it has been so frequently abused and employed in cases where indications for its employment were lacking. In the absence of a well defined ulcer or some of the complications of ulcer mentioned above as calling for surgical relief, a gastro-enterostomy should not be performed merely because the operator

had made a diagnosis of ulcer and opened the abdomen expecting to find one. Gastro-enterostomy made for the relief of ulcer symptoms when no such ulcer can be demonstrated at the operation, will usually prove worse than disappointing. Ulcers situated high in the stomach, at or near the esophageal orifice, can neither be excised nor are they relieved by gastro-enterostomy. For the relief of such patients a jejunostomy should be employed. Gastro-duodenostomy may be employed for ulcers situated at or near the pylorus. In a few selected cases the pyloric stenosis due to cicatricial contraction of an ulcer may be relieved by pyloroplasty. This operation has, however, properly been almost entirely replaced by either gastro-duodenostomy or gastro-jejunostomy.

For the relief of the condition known as hour-glass stomach, and which is usually due to cicatricial contraction following ulceration, I have found as a rule the most satisfactory procedure to consist in a gastro-gastrostomy followed, if made necessary by more or less pyloric occlusion, by gastro-enterostomy.

Hemorrhage—Hemorrhage from the stomach may be most profuse and sudden, slight and persistent, slight and remitting or occult.

A patient with an extreme and profuse gastric hemorrhage, which seems to threaten life, should never be subjected to operation. The shock or collapse is in such cases so marked as to render operation very dangerous. Many such patients have died upon the table, the bleeding vessel never having been ligated, as the location of the bleeding point is in all cases under such circumstances most difficult, and in many impossible. Such a patient should be given a large dose of morphine, kept absolutely quiet in bed with ice over the epigastrium, and given no fluids by mouth for at least forty eight hours. Few patients so treated will die from the hemorrhage, as the bleeding usually ceases when the blood pressure has been sufficiently reduced. The greatest care must be exercised both as to feeding and keeping such patients quiet for many days. After the patient has regained a fair amount of strength, should the bleeding show signs of recurring, immediate operation with excision of the ulcer, ligation of the bleeding vessel through a large opening in the stomach wall if necessary or a gastro-enterostomy, should be performed. Slight and persistent hemorrhage, slight but recurrent hemorrhages and occult hemorrhage, all call for surgical relief and should be handled as outlined above according to conditions which are discovered at operation.

Perforation—Every case of perforation of a

gastric or duodenal ulcer should be operated upon as soon as possible. The edges of the perforation should be trimmed and the rent closed if possible. If secure closure is difficult of execution, an omental patch applied over the suture line is frequently of great service. If the condition of the patient is good, a gastro-enterostomy may be made if indicated. Many of these patients however, have at the time of operation, a spreading or a well advanced peritonitis, and should not be subjected to a prolonged operation. Such patients are dying not from the fact alone that they have an ulcer but because of one of its most serious complications, namely perforation with resulting peritonitis. Death from peritonitis having been averted by prompt and efficient surgery, gastro-enterostomy may be safely made at a second operation should the necessity for it be manifested. It is my custom, in cases of perforation, to drain the area immediately adjacent to the perforation with a strip of rubber dam and should, as is frequently seen in patients coming late to operation, soiling of the peritoneal cavity be more or less widespread, a tube and gauze drain is placed in the lowest peritoneal pouch through a median stab-wound just above the pubis. I have operated upon many cases of perforation and have been surprised that the patients have almost invariably made good recoveries. As a commentary, in passing upon the frequency with which one may meet with such cases, it may be stated that during five consecutive weeks in late June and July, I saw four patients the victims of gastric and duodenal perforations. Two of each. One patient who was admitted in dying condition from advanced peritonitis, and whose perforation was of three days standing, was found at autopsy to have a perforation of the duodenum which would have been unusually accessible to operation. The other patients, one with a perforation of the first portion of the duodenum and the other two with perforations of the stomach, were in good condition when admitted and made uneventful recoveries after operation. This small series, taken because so recent and because the patients followed one another to the hospital so closely, illustrates most forcibly the value of prompt recognition of and immediate interference in perforated gastric ulcer.

Adhesions—Adhesion of the stomach to a neighboring viscus or to the abdominal wall, is of comparatively frequent occurrence and is often productive of great distress. Perigastric adhesions as complications of gastric ulcer are due to the gradual involvement of the serous coat by the extension of the ulcerative process with a localized peritonitis as the result, which secures the adhesion of the infected area to that organ or

organs with which it comes in contact. In two hundred and twenty-six cases of chronic ulcer of the stomach collected by Fenwick, post-mortem examination revealed the presence of adhesions in ninety-six, or forty-two and five-tenths per cent. This percentage is, I believe, too high, and would not be maintained in a much larger series of cases. While I have many times encountered such adhesions, I would not place their frequency of occurrence at more than 15 per cent. The liver, pancreas, transverse colon, abdominal wall, mesentery and spleen may be involved. Patients suffering from peri-gastric adhesions have as a rule more or less continued pain, which unlike the pain accompanying ordinary ulcer cases, is not marked by remissions. Depending upon the area of the stomach wall involved, the impairment of motility and the evidences of stenosis or stasis are more or less pronounced. The occurrence of such adhesions demands operative relief, and such should be promptly furnished.

Whenever possible the adherent gastric area should be carefully separated from its point of contact, the ulcerated area excised if possible, and the rent in the stomach wall closed. If excision is impracticable, the area should be turned in by Lembert sutures. If this cannot be done, an effort to prevent the re-establishment of the adhesions should be made by covering the surface involved with an omental patch or Cargile membrane. The raw surface left upon the viscus or tissue to which the stomach was attached, should be peritonized if possible, and if not, it also may be covered with omentum or Cargile membrane.

In some cases the adhesions will be so firm and so extensive as to preclude the possibility of safely separating them. In such instances a gastro-enterostomy will usually restore the impaired gastric function and furnish relief to the patient.

RESULTS OF THE COL. ELLIOTT TREPHINE OPERATION FOR GLAUCOMA*

RALPH H. PARKER, M. D., Des Moines

A consideration of the Iowa cases of glaucoma operated by the Elliott trephine method, while not furnishing sufficient data to enable us to arrive at definite conclusions, will be of interest, and serve to show the drift of sentiment among eye surgeons as to the future of this operation.

With this idea in view I wrote a circular letter to all the physicians interested in this section of the State Society, a series of questions relative to glaucoma, and the trephine method of treatment.

The answers given me in reference to the fre-

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quency of iritis, the value of iridectomy, visual results, and the effect of the operation upon tension, have been arranged in table form. The answers to the queries will be given as questions and replies.

I wish to thank the members of this section for their courtesy and promptness in replying to my circular letter as the questions, by their very nature, must have required quite an amount of their time and consideration.

TABLE NO. 1—Iritis

| Types of Glaucoma (de Schweinitz Classification) | Operated Without Iridectomy No. of Iritis Cases. Yes-No | Operated With Partial Iridectomy No. of Iritis Cases. Yes-No | Operated With Com- plete Iridectomy No. of Iritis Cases. Yes-No |
|---|--|---|--|
| Acute congestive.... | : : | 7 : 3 : 3 | 2 : 1 : 1 |
| Chronic congestive..*1 | : : | 2 : 1 : 1 | 1 : : 1 |
| Non-congestive | 3 : : 2 | 11 : : 9 | 2 : : 2 |
| Total...33— | 4 : : 2 | 20 : 4 : 13 | 5 : 1 : 4 |

4 cases no report.
*1 case had a previous iridectomy.

TABLE NO. 1—This table has been arranged with reference to the frequency of iritis following this operation, also with reference to the type of operation done i. e., if done with complete, or partial or without an iridectomy.

It is interesting to notice that twenty-five cases out of the twenty-eight reported were done with a complete or partial iridectomy. Col. Elliott, when in Chicago, insisted it was not necessary to do an iridectomy. It should be done only when there is prolapse of the iris.

The five cases operated with complete iridectomy were followed by iritis in 20 per cent. of the cases.

The twenty cases operated by partial iridectomy had iritis in 20 per cent of the cases.

Three were operated by the simple trephining. Two had no iritis following; one no report.

The Iowa eye surgeons are to be complimented on their results as the report of Willard Parker on Col. Elliott's cases and his own show 51 per cent. having iritis as a sequel of the operation. Willard Parker giving as high as 100 per cent of cases of iritis when operated without iridectomy. The next highest per cent. of cases having iritis being in those of partial iridectomy, 75 per cent. In complete iridectomy the per cent. of cases having iritis fell to 12½ per cent.

TABLE NO. 2—Visual Results

| Type of Glaucoma | No. of Cases | Good | Fair | Poor |
|--------------------------|--------------|------|------|--------------------------------|
| Acute congestive | 8 | 4 | 3 | 1—No vision prior to operation |
| Chronic congestive | 4 | | 3 | 1 |
| Non-congestive | 16 | 3 | 8 | 5 |
| Total..... | 28 | 7 | 14 | 7 |

TABLE NO. 2—The table impresses one with the poor showing made in visual result in all types of glaucoma. I assume that most of us would consider good to mean improvement; fair, no increase of vision; and poor, a decrease.

In acute congestive glaucoma 50 per cent. received good vision.

In non-congestive glaucoma 19 per cent. were reported good.

In the four chronic congestive cases all reported fair or good.

TABLE NO. 3—Tension Results

| Type of Glaucoma | No. of Cases | Good | Fair | Poor |
|--------------------------|--------------|------|------|------|
| Acute congestive | 9 | 7 | 1 | 1 |
| Chronic congestive | 4 | 3 | 1 | |
| Non-congestive | 16 | 11 | 3 | 2 |
| Total..... | 29 | 21 | 5 | 3 |

TABLE NO. 3—A comparison of table No. 2 and No. 3 will show that tension in glaucoma is a much simpler symptom to care for than decreased vision. If glaucoma is nothing but an increase of intra-ocular tension, then in the sclero-corneal trephine operation we have a cure—72 per cent. of all the cases show good report on tension. As in vision, so in tension, the acute cases show better results than the non-congestive.

Queries

1. How many glaucoma eyes have you operated by the Col. Elliott method? (This should include those cases you have had under observation, though operated by some other surgeon.)

Ans. Forty-two answers were received from the circular letter sent out. Thirty-seven operations were reported on glaucomatous eyes. These cases were all reported by men who have no dispensory or clinical material to work with. One reported "No operations—with me glaucoma is a medical and not a surgical disease." No one surgeon reported more than five cases; most of them one and two.

I appreciate the fact that thirty-seven cases with rather insufficient data will not permit us to arrive at definite conclusions. This report is unique in being made by men who are doing the operation infrequently. Their results compare well with those men of large clinical opportunities. Is this not good argument for a continuation of the operation by us?

2. What size trephine do you use?

A trephine making an opening 2 mm in diameter is the most popular; a few used 1.5 mm.

3. Where do you make the trephine opening?

- "Sclero-corneal margin upper quadrant."
- "Above as far down on cornea as possible."
- "⅔ on cornea ⅓ on sclera, directly above."
- "Half and half."

4. What do you think is the probable cause of the iritis occurring so frequently following this operation?

- "Traumatism of operation."
- "Infection at time of operation or sub-acute in type, as that which is often seen in a traumatic cataract with non-perforating injury."
- "Infection through thin bleb."
- "Traumatism of iris and infection."
- "Probably infection through the thin flap of wound."

"Dull instrument and anxiety for too thorough operation."

5. Is it your opinion that an iridectomy made at the time of trephine operation has a favorable influence on the subsequent iritis?

- "Yes." (90% of answers.)
- "Can't say."
- "One case when there was only a small button of

iris removed, had bad iritis. My only other case had complete iridectomy and not a trace of iritis."

"Can't form an opinion from my cases."

"Think so. Always do mine with an iridectomy."

6. In how many of your cases has the trephine opening furnished inadequate drainage?

Four cases. One by a surgeon reporting five cases. Another by a surgeon reporting four cases. Two by two surgeons, each reporting but one case.

7. Do you use any operative technic for the prevention of too thin a covering over the conjunctival bleb?

"Yes, try to get a thick conjunctival flap, so the bleb which forms will have a thick covering. A thin covering the cause of later eye infection."

"No."

"In splitting the cornea I endeavor to obtain a thick flap."

"Yes."

"No, except that I use a large flap and try to get the cornea split evenly."

8. Have the results of this operation been up to your anticipations?

"Yes."

"Yes, fairly so."

"Hardly."

"Results were good in this one case."

"Not entirely, but believe it the best procedure we have at the present time."

"No."

"Anticipations, yes—Original claims, no."

9. Will you continue using the Elliott trephine operation for glaucoma in preference to other established methods?

"No."

"Yes," (50%).

"Ideal operation for simple glaucoma."

"For acute congestive glaucoma will use broad iridectomy—von Graefe operation cannot be improved upon for this type of glaucoma."

"Chronic, simple, yes—Congestive, no."

"I don't know."

10. Have you had any cases of infection following the trephine operation? If so, how long after the operation did they occur?

"None unless the slight iritis that followed the chronic congestive case was due to infection."

"One three weeks and one five weeks after operation, probably due to a sinus as suggested by Elliott."

In reviewing and classifying these replies, the following impressions have been made:

Statistics gathered in this way lack accuracy.

In the scramble for new operative measures for treating glaucoma we may lose sight of the importance of medical treatment in this disease.

Iritis following this operation for glaucoma is

a frequent complication. Most of the doctors think the iritis is due to trauma and infection.

Most surgeons do the operation by a partial or complete iridectomy.

Trephining an eye gives sufficient drainage in most cases to relieve plus tension. In 12 per cent. of these cases the drainage was reported inadequate.

The vision improvement is poor. It would be interesting to know what results other methods of treatment have on vision.

This is an operation that has made a popular appeal to eye surgeons, as many report doing it or having made plans to do it at the first opportunity.

With many men the results have not been up to anticipation.

This operation will not be used to the exclusion of other operative procedures. Some will use it for non-congestive cases and use the von Graefe iridectomy in acute congestive cases.

Discussion

L. W. Dean, M. D., Iowa City—Unfortunately, owing to my conservative tendency, my experience with the trephining operation is confined to the last fourteen months. It was only after seeing Doctor de Schweinitz and hearing from him his results with the trephine operation, and after seeing a beautiful case which Doctor Pearson had trephined, that I substituted for the Lagrange operation, which had been very satisfactory to me, the trephine operation. I am sure that up to the period of making some form of filtering cicatrix in chronic simple glaucoma, my operative procedures for this condition were exceedingly unsatisfactory. At present I feel very much gratified with the results in certain types of chronic simple glaucoma from the Elliott operation. And I must confess that I am still old fashioned enough to use miotics locally, combined with most careful examination and treatment on the part of the internist, in not a few cases of chronic simple glaucoma. I find so many cases where conditions outside of the eye so contradict operation that I would feel lost if I did not consider it justifiable to give such a procedure a thorough trial before resorting to operation.

The first patient that I trephined was one with secondary glaucoma of each eye. There was no vision in either eye and it was merely a question of diminishing tension and relieving the patient from pain. A Lagrange operation was performed upon the right eye and at the same time a trephine operation upon the left. It seemed to me that the trephine operation was very easily performed. The result in this case was better than that which was secured from the Lagrange.

Regarding the ease with which the trephine operation can be for the first time performed, will say that in my judgment, the trephine operation is much more readily taught to my post-graduate students

than the performance of a proper glaucoma iridectomy. It is a simple matter to teach the boys the performance of the iridectomy for visual purposes, or for cataract extraction, but it seems to me that the performance of a proper iridectomy for glaucoma is one of our most difficult operations.

Since April 1, 1914, I have trephined twenty-five eyes. I would question very much the value of any information that we might get from a study of these cases, owing to the fact that all of the operations have been recently performed. I believe that statistics to be of value, should only take into consideration final results. Certainly, in dealing with such a condition as chronic glaucoma we have no reason to assume that any condition that we have now is the final result. Again, many of these cases have not been seen since they left the hospital, and the results as reported are necessarily only the immediate results, and do not deal with the condition of the eye even as late as a few months following the operation. However, I will make my report, basing my results upon the clinical histories and the post-operative results that we have at hand to date.

In expressing the results I will use the terms which we ordinarily use in our work. By an excellent result I mean one in which the vision is very much improved; a good result, vision the same as before operation or slightly improved; fair result, vision slightly poorer but tension apparently checked; poor result, much loss of vision; very poor result, enucleation or a second operation indicated; negative result, where the operation is done for tension results only and the object secured.

Sixteen eyes suffering from glaucoma simplex were trephined. I have included under the term glaucoma simplex, those cases where there was no history of pain or redness in the eye. Of the sixteen eyes that were trephined for glaucoma simplex, one patient that had each eye trephined, developed mania and returned home still suffering from this trouble. The results in this case were not determined. Of the remaining fourteen cases, five secured an excellent result, two a good result, one a fair result, one a poor, one a very poor, and four negative. The patient that secured a poor result had before operation vision sufficient to count fingers at one meter. The patient that had the very poor result had absolute glaucoma. The operation did not relieve the increased tension and the eye was later enucleated. The patient's other eye, which was trephined at the same time, was one of our most excellent results. The four cases that were negative were cases of absolute glaucoma that were trephined simply for the reduction of tension. This was secured in every case.

One case of simple chronic glaucoma was to me a very interesting case. I watched this case for a year suspecting a chronic glaucoma. Among other things I dilated the pupil, first with cocaine, then euphthalmine, and lastly with homatropine, without being able to detect pathological tension with the tonometer. Within two months after this I saw the patient with a typical glaucomatous attack. This case

showed that one test that I had long considered reliable was not infallible.

Four cases were operated for secondary glaucoma. The results were as follows: poor, one; negative, three; very poor, one. The three negative cases were cases that were blind before operation and were trephined to relieve tension and pain. This result was secured in the three cases. One patient that was blind and was trephined to relieve tension, had a very poor result in that a second operation was indicated. The poor result was a patient that had secondary glaucoma with vision enough to see movement of the hand. This vision was lost.

Two cases of hemorrhagic glaucoma were trephined. Each eye was totally blind. One secured a negative result. The other patient had a late secondary infection. This however, was nicely controlled by the use of atropine. This was the only case of late secondary infection that we had.

One case of hydrophthalmos was trephined with a resulting elevation of the retina. One case of glaucoma secondary to cataract was trephined contrary to Elliott's recommendation. The vision before operation was ability to count fingers at three feet. Six months later, with a correcting lense the vision was 20/50. The patient with hydrophthalmos had had an iridectomy on the left eye years before. We found the tension in the eye with the iridectomy much higher than that in the better eye which had not been operated. The right eye had fair vision. The left eye, the one with the iridectomy, could count fingers at one meter. Because of elevation of the retina following the trephining of the poorer eye, we have advised the patient not to have an operative procedure in the other eye. The complete elevation of the retina came on about one week after operation. There may have been a slight elevation immediately following the operation which was not detected.

So far we have been very well satisfied with our results of trephining in chronic simple glaucoma when the case is not too far progressed. Naturally the result is very much influenced by the condition of the fields and the general condition of the patient.

In the trephine operations that I have done, we have found it necessary to stitch the conjunctival flap in only one case, and that was when the trephine was down at the lower border of the cornea. I found it easier to trephine at the lower border of the cornea than at the upper.

One case of chronic simple glaucoma had a small hemorrhage of vitreous following the operation. This, however, cleared up and seemed to have no influence upon the final result. In several cases of secondary glaucoma in children, the opening was made posterior to the attachment of the iris to the cornea but through the iris which had been plastered to the periphery of the cornea by the increased tension. Such patients have done well so far as tension is concerned.

Recently I have followed Elliott's suggestion carefully in making the flap thin above and increasing the thickness where the cornea is split. We do not

make the incision on the side of the flap down below the upper margin of the cornea as formerly.

To split the cornea I use a very sharp pterygium divulsor. This has a long convex cutting edge and I can work much better with it than with a needle. All of the trephinations that I have done have had a partial or a complete iridectomy performed. Once the disc of sclera was lost in the anterior chamber and was fished out with some difficulty with a spoon. The only procedure that I ever use to replace the iris from the wound is to massage the cornea. This is easily done and has been sufficient in every case.

Following every trephine operation I am sure that we would have been troubled with iritis if atropine had not been used. In my earlier cases atropine was used on the second day, and frequently adhesions were found that could only be broken up with difficulty. In the last six months we have been using atropine the day following the operation, and occasionally we find a small adhesion present then. It is my intention to continue using the atropine the morning following the day of the operation.

Whenever there is the slightest indication of increased tension or any indication whatever of interference with the wound filtrating, when the patient is in the hospital following the operation, the eye is massaged.

In two cases of chronic glaucoma simplex where the vision before operation has been less than 6/60, and after operation 6/12 or better, both patients have complained of very great difficulty in seeing on going from a dark into a light room, or upon going from the house out into the bright sunlight. One patient told me several days ago that when he woke in the morning his vision was perfect until he faced a bright light, when everything would blur. I have watched both of these patients, time and time again, when they enter the dark room in my office where the light is burning. The patients can see perfectly to get around town, travel from place to place, but as soon as they step into the lighted dark room it is perfectly evident that they cannot see good. This condition lasts for from four to five minutes. I have been unable to explain this to my entire satisfaction.

Dr. G. E. de Schweinitz, Philadelphia, Pa.—Because of Col. Elliot's enthusiasm, large experience and admirable operative skill, the impression has been widespread that so-called corneo-scleral trephining is an operation easily performed. This seems to me unfortunate. I do not for a moment dispute that any one possessed of operative skill can approach this operation with confidence, but I think it is a pity that any one, I do not care how great his skill may be, should regard the procedure as one which, to use a colloquial expression, is easy. As I have elsewhere said, a certain analogy exists between this operative procedure and cerebral decompression. A technically correct cerebral decompression which releases intra-cranial tension is followed in many instances by subsidence of the papilledema, and preservation of vision. An operation which releases increased intraocular tension is frequently followed by

the subsidence of the glaucomatous symptoms, and the preservation of vision is secured. But the release of intra-cranial pressure as the result of cerebral decompression is not always followed by the subsidence of disc-edema, and vision is not always saved. So, too, the release of intra-ocular pressure is not always followed by a subsidence of the glaucomatous symptoms, and sight is not always saved. In a word, increased intra-cranial pressure is not the whole story of choked disc; neither is increased intra-ocular pressure the whole story of glaucoma. If it were, the Lagrange, Herbert, Fergusson-Elliot and other operations which secure a permanent filtering area, would have a well-nigh perfect relationship to the treatment of this difficult and dangerous disease.

Again repeating what I have written elsewhere, I am unconvinced that corneo-scleral trephining is a better operation in acute primary glaucoma than a technically correct iridectomy. I am convinced that this operation and other methods which secure a permanent so-called filtering area, are superior in their efficiency to the usual iridectomy in the treatment of non-inflammatory chronic glaucoma, but I am unprepared to agree with those who state that a well-placed peripheral iridectomy, the incision beginning well in the sclera, is unable to check in some instances at least, the progress of chronic glaucoma. Doubtless in the event of failure of iridectomy in these circumstances, for example, a corneo-scleral trephining is a better operation than a repetition of the iridectomy, or even an ordinary sclerectomy.

One would approach the Fergusson-Elliot operation with more confidence if the frequency of iritis could be mitigated, and it is interesting to recall the fact that the tendency to inflammation of the iris after this operation is very much less if with the trephining is associated a complete iridectomy, which evidently goes to show that the iridectomy in its importance has not been eliminated. The iritis which occurs after this operation appears either as a quiet iritis, with almost no signs of inflammation of the uveal tract but with the gradual development of soft synechiæ, or as a sharp ordinary plastic iritis, which may arise at a longer or shorter interval, often after the eye has forgotten the effect of the original operation. This early quiet iritis may possibly be due to some change which takes place in the iris tissue as the result of the reduction of tension, perhaps due to some toxic property which the aqueous begets. It has seemed to me that the later type of iritis, which of course must be regarded as a type of infection, non-purulent infection, I mean, is more likely to occur in the patients who are liable to the so-called auto-toxic forms of uveitis. Either of the types of iritis may be prevented by the early use of mydriatics. Personally I prefer scopolamin. As I said in the beginning of this discussion, I do not believe that it can be maintained that increased intra-cranial tension is the sum and substance of this difficult and complex disease which we call glaucoma, and in its treatment, in addition to operative procedures, the best line of therapeutics, suggested by studies of the

metabolism and with the aid of an expert internist, is required.

It seems to me that we should more carefully classify the various types of glaucoma, trying to gather together those in which the release of the increased intra-ocular tension appears to be the only vital necessary procedure, and those in which the other factors to which I have referred have a paramount relationship, and meet the indications according to the studies which are made. If I am not mistaken, Lagrange himself, has made just this kind of study, and his example might well be imitated. We all know that clinicians have learned that arbitrary standards of vascular pressure cannot be set up, and that there may be what has been called by Hare a pathological norm in arterial pressure which it is unwise to disturb. Dangerous as increased intra-ocular pressure is to the health of an eyeball, I suspect that we should, praiseworthy and important as our efforts are to get rid of such pressure, be careful that we do not originate another danger, to wit, the creation of pathological changes brought about by too long-continued hypotony.

I have not referred to another danger, of which many examples are now upon record, which has arisen in relation to the Fergusson-Elliott corneoscleral trephining, namely, late infections, and they are a real danger, and we are especially indebted in this country to studies in this respect by our distinguished confrere, Dr. Harold Gifford. I do not wish you to think that I am posing as a critic of Col. Elliot's operation. Far from it. Comparatively limited as my experience is, I have had admirable results, as doubtless all of us have had, but much as I admire Col. Elliot's important contributions to the therapeutics of glaucoma, especially from the operative standpoint, I do not believe that we should be blind to certain ever-present dangers which surround this operation and its results.

Dr. R. H. Parker, Des Moines, in closing—We are very much indebted to Dr. de Schweinitz for his entertaining and instructive discussion and feel that the session has been benefited greatly by having him with us.

THE INFLUENCE OF DEFECTIVE VISION UPON THE PLAY LIFE OF THE CHILD

MARY K. HEARD, M. D. Iowa City

If the play instinct is a natural one, what might there be in a child without marked physical defects to cause him to become a book worm, a recluse or a truant? Is the desire to play lacking in these cases, or has the instinct been smothered by the humiliation of never winning or the taunts of other children and the fault finding of parents and teachers.

My attention was drawn to this subject a number of years ago, when after a series of examina-

tions of school children I realized that none of them were having any normal play life. They seemingly cared little or nothing for the games which demand a keen eye, a steady hand, and lead to normal bodily development, by stimulating a love for out door sports, or for the quieter household games which also teach self control whether winning or losing. These children preferred their own society, remaining in at recess rather than playing with other children on the play ground, and when at home chose to curl up with a book or play by themselves unless the game was something spectacular—like playing Indian or having a wild west show or dressing up in grown up clothes, the success of such a game depending not so much on keenness of sight as on the imagination, and so allowing for more individuality and not requiring so much team work.

The why of all this kept coming up until at last through question and cross question the children answered it themselves.

We, none of us, like to be thought queer or unable to do what others can do, and children soon learn what they can and cannot do, and rather than fail they hide their inability behind a brave display of not liking the game, few however realize that the reason they do not care to play lies in the fact that they cannot see distinctly. They tell you many interesting things when you visit with them as to their reasons for not joining in the games, some of which they could play. The children's kingdom is much like the social kingdom, drop out because you do not play cards and dance, and you must either build a world of your own or you soon fall into the rear, forming the admiring audience or retiring to read your book undisturbed, and a child need not be blind to be ruled out of the game, and defective vision is, I believe, one of the most frequent causes why so many of these children do not play.

A few taunts, and who can think of more derisive ones than the small boy or girl? A laugh at repeated failures, and what are the results? Far reaching indeed. First a drawing away from other children, then a growing defiant or don't care attitude, an inability to keep up with the grade, and then too often a dropping out of school and the search for work begins, or a period of do-nothing-ness follows, and too frequently the records of reformatories and jails complete the story.

But why should children who have never done anything to injure their eyes, have poor vision? Is it hereditary? For an answer to these questions let us consider some of the conditions existing in the human eye at birth.

It may surprise those who have not thought on

this subject to know that at birth the eye is an undeveloped organ, and that a normal eye is simply a transitional or temporary condition in the process of growth.

The normal eyeball at birth is smaller in all axes than a fully developed eye and is not a perfect visual mechanism, for the parallel rays of light are not brought to a focus on the retina, but instead the retina cuts the cone of light and we have diffusion circles formed, giving us an indistinct image.¹ This condition of short eye

1. Fuchs p. 844 Duane Ed. Ed. 4.

causes hyperopia or far sight, and is found to exist in almost all children at birth.

The growth of eye and brain are both completed earlier than the rest of the body, and the eye becomes an emmetropic or normal eye focusing the parallel rays upon the retina, and a clear cut image is the result, but this is the ideal state and it is very rare.

If the development of the eye stop here, all well and good, but if by reason of excessively close work or a tendency to weakness in the coats of the eye, the length may be increased by stretching, we have a long or myopic eye produced, which is not a natural condition as hyperopia and emmetropia, but instead a pathological condition.

When we realize that an increase of 1 mm in length makes a difference of 3 D of refraction, we do not find it as difficult to understand how it is that only $1\frac{1}{2}$ to 2 per cent of all adults have normal vision.²

Out of 9,192 school children refracted in Philadelphia 70.2 per cent were found hyperopic and 10.5 myopic.³

This is, I think, typical of most of our cities, and in about 75 per cent. of these cases we find the children are retarded and yet the eye is only now being considered as one of the factors in producing so many backward children.

Following a child through its various stages of growth, we begin to realize how little we really know as to the acuteness of vision.

The day of rattle and drum is followed by blocks and picture books all in gay colors, and a child with lowered or indistinct vision will play through several years without attracting the attention of the parents. It is only as the children grow older and begin to play with other children, or learn to read, that any minor defect is noticed, and more often it is not the vision that is given attention, but some peculiarity such as holding the head to one side, preferring to play alone, not caring to read, but passionately fond of having

stories read or told, bashful and awkward, all of which lead to constant correction on the part of the parents, making the children most uncomfortable through their self consciousness.

Then come the schooldays with an unexplored country about them. Relations are all changed, they must fight their own battles and show themselves superior or equal to those of their own age, and here it is that the survival of the fittest in play occurs, and the child with impaired vision is laughed to scorn in an attempt to hit a ball, use a slingshot or play marbles, jump the rope or play hop scotch.

The class work also brings its trials, for these children are often slow of speech, measuring or weighing each word. Letters are confused and words miscalled, and so they are considered as naturally dull and but little is done to encourage them. They fail and so must spend another six months or year in making the same mistakes and receiving the same stereotyped criticism "Well Johnny haven't you learned that word yet as many times as you have been over it" and Johnny knows in his own heart that there must be something wrong that he cannot see the words as the teacher sees them.

As the months go by and the other children pass on in grade and game, the Johnnie's and Mary's who fail, wonder within themselves why they can't do things other children do, but having been taught their lesson and place they build a world of their own and people it with wonderful children who can do all the things they would like to do.

Then there comes into the school a teacher, school nurse or physician, who with tact and infinite study and patience, win the confidence of these sensitive retarded children, but the parents are not yet won, for more often these same parents resent the interference and object seriously when they are told that they must send their children for an eye examination, and still more when told that glasses are an absolute necessity if their child takes his or her place in this world of work, for play does not appeal to them.

But what has all this to do with the subject. Scholarship and a desire to play do not go hand in hand, perhaps not, but the relation should be much more intimate than it is, and if we take a little time to visit with these lonesome children we will wonder at our blindness and not theirs.

Not all children with this small error of refraction suffer from eye strain during their earlier school days. With good health and an abundance of outdoor life the ciliary muscle is able to overcome small amounts of hyperopia, but let these children have any of the infective diseases, so

2. DeSchweinitz—Diseases of the Eye—page 153.

3. Reference. 4th Int. Cong. School Hygiene, Vol. v, page 78. Lewis C. Wesscl's Defective Vision in Children.

common to childhood, and symptoms of eye strain develop or the child does not care to join in the games and takes no interest in things he once enjoyed, fails in his school work and may finally be sent as a last resort to have his eyes examined.

The mother and child will insist that the eyes were perfect until the measles or scarlet fever injured them. This is the universal belief for people do not stop to think that any disease which lowers the general physical resistance has also lowered the muscle tone in the eye, and the little ciliary muscle cannot do double duty as it once did, for our accommodation or ability to see distinctly objects both far and near depends upon this muscle, which regulates the curvature of the lens. This power diminishes as we grow older, but in childhood we can accommodate so that an object may be seen clearly at a distance or at a few centimeters from the eye, and so a small error may be overcome.

A building up of the general system will help some, but more frequently than not, so far as the eye is concerned, this power is not regained, due perhaps to the custom of using the eyes excessively during periods of convalescence.

Through the primary and grammar grades the most common errors are naturally hyperopia and hyperopic astigmatism, and not until about high school age do we find myopic or near sighted children except where the child has been myopic from birth.

I shall not at this time discuss the troubles belonging to the various phases of our higher educational system, but instead will let some of these children plead their own cause.

I have selected a few typical cases from a large number of case records running back ten years.

These are children from our own city schools and schools throughout the state, and only in one instance from an institution where the oversight of parents was absent, but in this case the condition was no more than where the parents had not taken proper thought or care.

That you may judge a little of the influence of physical defects on the relative grade work, I have arranged the following tables giving the average age and grade of the children in our schools.

| 7 Years | | 5 Years | |
|----------------|-----|----------------|-----|
| Grade | Age | Grade | Age |
| 1 | 7 | 1 | 5 |
| 2 | 8 | 2 | 6 |
| 3 | 9 | 3 | 7 |
| 4 | 10 | 4 | 8 |
| 5 | 11 | 5 | 9 |
| 6 | 12 | 6 | 10 |
| 7 | 13 | 7 | 11 |
| 8 | 14 | 8 | 12 |
| Graduate at 18 | | Graduate at 16 | |

Case I. Harry F. H.; age eight; grade second B. Small and poorly nourished. Referred for eye examination because of his poor class work. Could not read, miscalled very simple words, missing one to three in a line. No headaches or any other symptom of eye strain. On questioning him as to his work and play, I found it all work and no play as he took the care of a tubercular father nights, got up at five, walked thirteen blocks and back cleaning stables at 50 cents a week, and went to school. I found he was passionately fond of horses and other animals but cared little for games. When asked if he never played ball he said "I used to try to play with the boys but I never could hit the ball for if I hit where it seemed to be everybody laughed and yelled at me, and if I tried to catch a ball I always got hit." Asked why he liked animals and he said "Gee a fellow can see where they are without half looking and they don't make fun of you."

I asked if he liked his drawing, and he said "Miss A. says everything I draw is lop sided." Testing his vision I found:

O D V 6/4 = (10) no improvement with lenses.

O S V 6/10 = (6) no improvement with lenses.

He was placed under atropine and the action of the ciliary muscle entirely relaxed and vision again tested.

O D V = 6/30 (2) cor sph + 1.50 = c + 0.25 ax 60 = 6/4 (a).

O S V = 6/30 (2) cor sph + 1.50 = c + 0.25 ax 120 = 6/4 (a).

This child was far-sighted and astigmatic, not a large error, but frequently the smallest errors cause the most troublesome symptoms as well as barring them from ball and marbles, mumble the peg and all other games so dear to a boy's heart.

With his glasses I found a marked improvement in his ability to locate objects, and this as well as his reading has greatly improved.

Case II. B. H. H.; age seven; grade one. Small nervous child with face absolutely expressionless. From the mother I learned that B. had always been queer, did not care to play with children, did not like dolls, but was happy making pets of all animals. Preferred a cat to a doll any day. During the winter or on stormy days when obliged to be in doors, she kept herself busy putting the chairs and moveable pieces of furniture back against the walls, for from babyhood a chair out of place had made her violently angry.

The mother had brought the child under protest but the teacher had refused to allow her in school unless her eyes were examined.

This the parents had refused to do as they had insisted that there could be nothing the matter as B. could see to pick up needles and pins which the others could not see. The week previous, however, they had become convinced that something was not right, for in driving to town she had suddenly said—"What a funny place for a red sofa." The red sofa was a brindle cow lying by the roadside.

I asked the child a few questions and the mother was more surprised than I to find that B. had never seen a bird fly, did not know that other children could see the separate leaves on a tree. Liked a kit-

ten because it didn't have to have any clothes made. Could not see the writing on the black board from the front seat in the school and liked to have the chairs back against the wall so she wouldn't bump into them, hence her orderly instinct.

O D V = 6/30 2.

O S V = 6/30 2.

Atropine correction.

O D V = count finger 2 m cor s — 1.00 = c — 5.00 axo = 6/10 6.

O S V = count finger 1 m cor s — 0.50 = c — 4.00 axo = 6/10.

This was a case of high myopic astigmatism.

Six months later she returned for examination and with her glasses could read (7) and had made second grade.

Her mother said that B. kept the family so busy showing them new things that they could scarcely get anything done. She seemed like another child and would go out and play with the children at recess, taking her turn at hide and seek or blind man's buff, something she would never do before.

Case III. S. W.; grade fifth a; eleven years old.

Mother dead, father miner, child lived with a "boarding mistress" and went to school. He was about the size of an eight year old, anemic, hollow-chested. Had been in school since five years old and never missed a grade.

For two years had suffered from attacks of burning of lids, pain in eye balls, print blurring on reading, headache dull but constant.

O D V = 6/75 (7) no improvement with lenses.

O S V = 6/10 (6) no improvement with lenses.

Atropine.

O D V = 6/15 (4) cor s + 7.25 = c + 1.25 ax90 = 6/6 (8).

O S V = 6/60 1 — cor s + 7.75 = c + 0.75 ax90 = 6/6 (8).

A few questions showed that he was a hot-house plant, was never allowed out except as he went to and from school—had read all of Dickens and Scott but couldn't play one old cat with the boys. I asked what games he liked—"Oh I don't play with the fellows." Don't you ever play ball? "No I'd like to but they always laugh so because I can't catch a ball." Asked if he knew why he couldn't catch it, he said: "The funniest thing happens. I can see the ball all right until it gets about there, pointing to a door perhaps ten feet away, and then I lose it." Did you ever tell anyone what happened to the ball? Why no! You know a fellow hates to be laughed at so I just don't try to play games for I guess I can't see as the other boys do.

This child had nearly nine diopters of hyperopia and so had difficulty in accommodating quickly enough to follow the ball. A child of eleven years has about 13 D. of accommodation and so can bring his work up to about 7 c.m. and yet see clearly. If, however, he is obliged to use

nine diopters for his distant vision, he has only four diopters to use for near work and could only bring his work up to 25 c.m. In accommodation, as in other muscular acts, all of our force cannot be in use all the time, a certain proportion must be kept in reserve or we have various nervous symptoms developing and so in connection with the eye we have headaches, smarting and burning of the lids, due to the constant strain to which we subject our eyes. This child could read but could not play, so he chose the worst thing he could do. Glasses were fitted and his father was told that the child must be allowed more out door life and his love for games stimulated.

Case IV. C. L.; thirteen years; grade fifth b. Child tall and thin, undeveloped, with the face of a little old woman.

She gave no history of headaches or other symptoms of eye trouble. Had never made a grade regularly but had been passed because of her age. Was slow in reading, geography, and spelling, but, quick in mental arithmetic. Moved slowly and used her hands awkwardly. Never cared to play with the other girls but pored over her books which she held within a few inches of her face, for this reason she told me she was near sighted just as her father had been.

O D V = 6/15 (4) no corrections with lenses.

O S V = 6/20 (3) no corrections with lenses.

Atropine.

O D V = 6/30 2 cor s + 7.00 = 6/12 5.

O S V = count finger + m — cor s + 7.00 = 6/12.

Her vision could not be brought down to 6/6, the average, as she is amblyopic, a term used to denote lowered vision from lack of use of eyes.

With proper correction her vision is steadily improving as is shown by the tests made each month. At the close of the first semester following her examination, she came especially to tell me that she had passed to the sixth grade, had gotten E for the first time in geography, reading and spelling, and could see to hunt up all the cities and rivers on the map.

This child has continued to report each month since her examination, and it is a pleasure to see her. She is now in the seventh grade. Plays with her mates and has learned to do many things which seemed impossible at the time of her examination.

Case V. L. R.; age eleven; fourth grade. Since four years of age her home had been in an orphanage. Ever since she can remember her eyes have pained her and print blurs when she reads.

O D V = 6/15 (4) — no improvement with lenses.

O S V = 6/15 (4) — no improvement with lenses.

Atropine.

O D V = count finger 2 m — cor s + 3.25 = c + 100 ax25 = 6/12.

O S V = count finger 2 m cor s + 3.25 = c + 100 ax100 = 6/12.

An astigmatism with an oblique axis complicated the hyperopia. I found that about the only game she enjoyed playing was tag, as she was so poor in

games that the girls never chose her in playing sides. Croquet was out of the question for the only way she knew where the wickets were was when she fell over them. In trying to jump the rope she always tripped. She enjoyed checkers but could not play dominoes as she could not see the spots to count them. It is now two years since she was examined, and her improvement and development is marked.

Case VI. H. D.; thirteen years; second year in high school. Large for his years, complains of almost constant headache. Does not care for any games, preferring to read. Has read most of Stevenson, Kipling and Shakespeare. Mother says she has never been able to get him to play normally. Likes to ride horse back but this is about his only recreation. Has never played ball or marbles, doesn't like them, but finally confessed that the reason he didn't play marbles was because he couldn't bend his thumb like the other boys did and so his marble always went side ways and never hit the mark, and in playing ball instead of hitting the ball, the ball always hit him.

$$O D V = 6/75 \text{ cor } s - 0.25 = 6/6.$$

$$O S V = 6/5.$$

Homatropine.

$$O D = 6/15 \text{ cor cyl} - 0.25 \text{ axo} = 6/5.$$

$$O S = 6/5.$$

This was a case of low myopic astigmatism in the right eye and normal vision in the left, and the confusion of the normal with the abnormal image in fusion caused him to misjudge distances so that it was his judgment and not his thumb which was at fault.

Aside from these cases, all of whom are children, I have seen fit to interrogate many adults as to their school days and play days.

Mr. J.; teacher; worn glasses three years only. Since having eyes fitted has discovered why as a child he could not take his turn at the bat. If he hit where the ball looked to be, it wasn't there.

$$O D V = 6/5 \text{ cor } c + 0.75 \text{ ax}90 = 6/5.$$

$$O S V = 6/75 \text{ cor } c + 0.5 \text{ ax}90 = 6/5.$$

Atropine.

$$O D = 6/60 \text{ cor } s + 0.25 = c + 0.75 \text{ ax}90 = 6/5.$$

$$O S = 6/10 \text{ c} + 1.25 \text{ ax}90 = 6/5.$$

This was a case of hyperopic astigmatism, and his blurred vision barred him from the game.

Mr. S.; twenty-eight years old; farmer. Left school when only eleven years old as he couldn't get along with his studies, never could play as he always got in the way and got knocked down.

Four years ago he was advised to wear glasses—his vision showed:

$$O D - \text{count finger } 1 \text{ m} - \text{cor } s - 8.00 = 6/10.$$

$$O S - \text{light perception} - \text{cataract}.$$

He said his greatest trouble was in locating objects, especially in a new place. Things looked farther away than they really were and so tumblers of water and other things were frequently knocked over at the table.

Mr. A.; twenty-six years old; engineer. Complains of eye strain upon close use. Was obliged to give six years to his college work because of serious eye strain, which had not caused him any trouble until as a freshman he had so much drawing to do.

$$O D V 6/10 (6) - 1.00 \text{ ax } 90 = 6/4.$$

$$O S V 6/5 (6) - 0.37 \text{ ax } 90 = 6/4.$$

Atropine.

$$O D V 6/12 \text{ cor } s - 0.75 = c - 0.25 \text{ ax } 90^\circ = 6/4.$$

$$O S V - 6/5 \text{ cor} - 0.50 = c - 0.50 \text{ ax } 90.$$

This man was suffering from myopic astigmatism. I asked him what part he took in athletics. "Oh I always played on the side lines, carried water to get into the game, for some way I never could play ball."

"Couldn't see a ball until it hit me, and if I got close enough to see the marbles, they said I was hunching, so I didn't care much about going to school, no fun when you can't play and you get tired lugging the bats around."

I think sufficient cases have been cited to bring out the point which I especially wish to emphasize, namely that a defect of vision need not be a large one to materially change the whole aspect of life.

A child who does not meet other children on the play ground as an equal, loses much in mental as well as physical training, for these children are either precocious or rather backward in school. Nothing so far as I have been able to find, has been done on this subject of play—much work in relation to errors of refraction has been done and some statistics prepared regarding the influence of defective vision on the mentally deficient, backward or truant children. ⁴In a class

4. Wm. Martin Richards saying the backward school child. Fourth Int. Cong. Sch. Hyg. Vol. v, p. 75.
of defectives in New York City High School, consisting of thirty-seven boys who had failed in every subject, examination revealed, as compared with a class of normal boys in the same school,—that the class of defectives averaged less than one-half as good vision as the normal boys did.

If truancy and other types of delinquency have as their cause, defective vision, a little investigation of these cases will also show us that these same delinquent children do not know how to play, they can not study, why they do not know, fail in their work. They are not wanted in the games, never expected to do any thing in school exercises, and finally they quit school and join the gang or become cynical book worms, out of sorts with the world in general, or make business the be all and end all of life with no leaven of play to make life wholesome and sweet.

Not until we devise some plan and carry through by means of school nurses, dentists and physicians, a systematic examination of every school child, and so have all handicaps removed, then and not until then can we do away in part

with this recurring crop of backward or abnormal children, for play is as instructive as breathing.

By a thorough examination, and I shall limit this statement to the examination of the eyes, I do not mean the ability to read line 8 at 6 m. for many a child who can read 8 or even 10 is demanding of his eyes work out of all proportion to his strength, drawing on his physical and nervous reserve, until some day there will be a nervous overdraft, and another wreck due to modern educational methods will be reported.

I would urge that the fathers and mothers be made to realize the importance of play, that our teachers study the habits of the children, and that attention be paid to the natural method of development, for with play as one test rather than scholarship alone, grade after grade need not be passed before the cause for this abnormal condition is located.

I may seem extreme in my attitude toward this subject, but the longer I study men and women with their varied ways and habits, unhappy, suspicious, self centered or wholesome, cheerful and charitable, I am led to think that a balanced play life in childhood makes for happiness and broadness of view and develops a spirit of fairness and squareness—in short the ability of getting into life's program and making the most of one's self as well as those about one, comes largely from the childish games in which the faculties are developed, and those of fairness, endurance, bravery and courtesy are a few of the results instead of those other qualities which make for failure.

Let us co-operate in the play ground movement and work for the child welfare movement and insist that every child be given a chance through systematic and thorough medical inspection in our public schools.

AN EXPERIMENT IN CHILD INSPECTION

Laura Clarke Rockwood, Iowa City
Chairman of Child Welfare Department, Electa Circle of King's Daughters

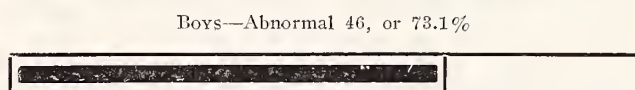
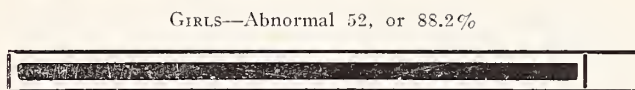
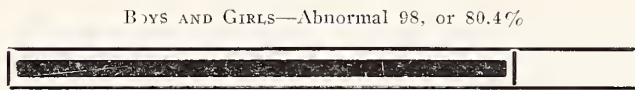
In order to derive conclusive proof of a thesis from statistics, it is necessary to have available a large amount of data. Nevertheless the relative value of statistical information from a certain field can often be estimated from the definiteness with which it points in some direction. Even if such information should have no other value than to stimulate the further investigation of the field in question, a comparatively small number of accurately made observations may be of importance. Such a series is given below.

The Electa Circle of King's Daughters of Iowa City, Iowa, have, as one form of social service, established a child welfare station. It is open one afternoon every two weeks, and examinations have been made of 122 babies. The tests have included mental, made by expert in psychological lines, and physical, made by physicians and dentists. The score cards of the American Medical Association have been used. The station is not a feeder for any clinic; no medicines are given nor any form of operation performed; no fees are charged. Simple advice is proffered, but if the child's condition is in any way abnormal, the mother's attention is called to it and she is advised to consult the family physician.

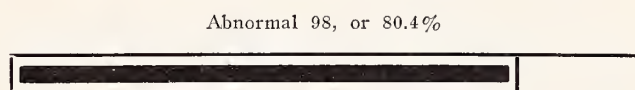
The work differs from that done in the dispensaries of the large cities in that the children are not from the lower classes alone but from the middle and higher classes as well. Many are from families connected with the university. Moreover, they are not brought because they are visibly in poor physical condition but because the mothers are sufficiently educated to wish to make the greatest possible use of modern science as applied to the study of children.

Only one class of abnormalities will be spoken of here,—throat troubles. Of the 122 children examined, sixty-three were boys and fifty-nine were girls, (the ages being from six months to thirty-six months). Eighty and four-tenths per cent had adenoids, enlarged or diseased tonsils. The boys were the more free from these troubles, 26.9 per cent. of the boys being exempt while only 11.8 per cent of the girls could show throats free from them.

Condition of Nose and Throat of 122 Babies—Sixty-three Boy Babies; Fifty-nine Girl Babies Examined at the Child Welfare Station of Electa Circle of King's Daughters, Iowa City, Iowa



Condition of Nose and Throat of 122 Babies Examined at the Child Welfare Station of Electa Circle of King's Daughters, Iowa City, Iowa



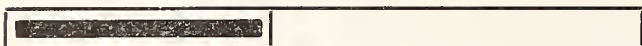
Adenoids 83, or 68%



Enlarged tonsils 67, or 54.9%



Discased tonsils 38, or 31.1%



A number of lessons can be learned from this series of observations.

An unexpectedly high percentage of deviations from the normal was revealed among children of well to do, even of well educated parents, and the condition was, as a rule, not suspected by the parent. These children had, or could have had, plenty of country air, an abundance of food and good care, yet the abnormalities were common. If they are found in and around a city of ten thousand in central Iowa there is no part of the country which can have the right to expect exemption from them.

There is great need of an inspection of this, or a similar kind in all parts of the country. School inspection is desirable undoubtedly, but such a one as this, carried on in early babyhood, has an evident advantage in the earlier detection of abnormalities and the consequent adoption of remedial and preventive measures.

The great value of co-operation of specialist and women's club is demonstrated. The King's Daughters must have the services of the medical and other experts; the specialist needs the women to make the connection between him and the children. Practically none of these children would have been taken to a free dispensary if it had offered its services, neither would the parents have thought these examinations sufficiently imperative to have paid a physician's fee.

These observations will be continued and tabulated from time to time in the hope of later securing some more definite information in regard not only to nose and throat troubles but to other maladies as well.

RAY LYMAN WILBUR, M. D., PRESIDENT OF STANFORD

We offer the following comments from the California State Journal of Medicine on the election of Dr. Ray Lyman Wilbur to the presidency of Leland Stanford University:

"The back-bone of the medical profession is not the city specialist or the wonderfully able surgeon; as the Journal has always contended, it is the country doctor who is thorough, careful and conscientious;

who works hard and studies hard and who has a large conception of humanity and of human nature and frailty. It is therefore a very great pleasure to record the appointment of Dr. Ray Lyman Wilbur to the presidency of one of the large universities of this country—Leland Stanford, Jr., University. The opportunity has been given him to extend his work and his activities into a very large field and the knowledge and the training which he acquired as a good "country doctor" will enable him to be very useful to the institution whose future destinies and policies he is to largely guide and shape. It would probably be conventional to compliment Dr. Wilbur upon his appointment; but would it not be more fitting to felicitate Stanford University and to compliment the medical profession and particularly the country doctor upon his recognition of what it, and the type, may stand for in the community?"

REGULATION OF THE PRACTICE OF MEDICINE

1. A list of all Supreme Court decisions, both State and Federal, on this subject, arranged chronologically by states (with reference to the Court Reports in which each decision may be found. This list alone, to the State Board Secretary or prosecuting attorney, is worth many times the price of the book.
2. Abstracts of 267 of the most important decisions, arranged chronologically by states.
3. A digest of the subject, considered topically with copious references to ruling cases under each head.
4. An analytical index, giving references to appropriate sections on each topic.

This book will be found useful to a large number of medical men. It is bound in legal buckram with stamped leather labels, contains 504 pages, and is sold for \$6.00, postage prepaid, by the American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

GOVERNMENT SEIZES SUBSTITUTES FOR SYNTHETIC DRUGS

The United States Department of Agriculture has announced the seizure of a number of imitations of neosalvarsan and aspirin, which, upon examination, proved to be worthless imitations of the imported articles. The medical profession is warned against the purchase of these drugs through irresponsible sources. The supplies of both these drugs have been much curtailed by the war, and there have been no shipments of neosalvarsan for some time and none is in the hands of the importers. While aspirin is made in the United States by the patentees, the price has been very much advanced on account of the greatly increased cost of the materials from which it is made, thus offering added inducements for substitutes.—(The Medical Fortnightly.)

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UNIVERSITY ALUMNI CLINIC

In accordance with a notice in the February number of this Journal, the State University Alumni Clinic will be held April 11th and 12th. The principal guests of the meeting will be Dr. E. C. Rosenow of the Mayo Clinic, and Dr. Asa B. Davis of New York City. It has been a custom within recent years for a home-coming season on the part of universities, and while the chief purpose of these annual meetings is to bring together the alumni of the institution, it has been found that the inviting of distinguished outsiders identified with medical science and medical education, has contributed very materially to the interest of the meetings. The gentlemen who have generally been invited were men of such high standing and ability that no doubt could exist in the minds of any one that the meeting would not be a profitable one. Another important purpose served by these annual gatherings is the development of the university spirit.

One of the most interesting lectures it was ever our privilege to attend, was delivered by President Means of Iowa College, at a banquet in Des Moines. President Means' subject was "The Oxford Spirit," which prevailed not only in Oxford, but all over the kingdom, and he estimated this Oxford spirit as the greatest asset of the institution; that its influence extended far beyond the young men who had graduated within its walls, and had indeed an influence upon English civilization. In our own country, in a smaller way, we have been able to watch the Harvard spirit that prevails so gen-

erally throughout New England, and has also had its influence upon thousands of people who have never seen Harvard University. There has grown up within recent years a Johns Hopkins spirit which is growing with surprising strength, and in lesser degree we are witnessing the same conditions developing in various sections of the country and in individual states.

It requires many years of time to mature a University spirit in even a single state, but the value of it cannot be questioned. In Iowa we have had several medical schools that have divided the interests of the profession probably in the most unfortunate way, but now that these schools have served their purpose and passed away, leaving only the University as the representative of medical culture in this state, it is to be hoped that the Iowa University spirit will develop, and that all remains of the jealousy of by-gone days will disappear, and with one common effort we will bring the Iowa University to that point of development which will enable us not only to say, but to feel, that a fully developed university spirit pervades the profession throughout the commonwealth, and we know no influence more potent than that of the coming together of the alumni of the institution at these annual meetings, with the helpful spirit of those who have grown famous beyond our borders, and have come to us with a message of helpfulness, which will develop higher standards of medical thought and a purer medical sentiment and life.

SENATOR J. H. ALLEN RESIGNS

We are informed by the Register and Leader of March 1st that Senator Allen of Pocahontas has resigned as senator for the district he represented in the Iowa Legislature, to become a candidate for governor. Senator Allen will be remembered by the medical profession of the state on account of his solicitation for the welfare of the chiropractors and any other kind of short-course practitioners who might desire to heal the sick for the small consideration of two dollars per head; or perhaps, as "Doctor" Palmer of Davenport said before the Senate Committee last winter, "to do the work of Our Lord Jesus Christ;" if our recollection serves us right, at the same price. Medical legislation in Iowa has been pretty clean, and most of the legislators have been willing to listen to the merits of a medical proposition. They have been able to appreciate fairly well what has been accomplished by medical science in protecting life and in furthering the interest of commerce. It almost presumes upon the intelligence of the public to mention hook-

worm, pellagra, malaria, yellow fever, beriberi, in our country, and the protection against importing cholera, bubonic plague, etc., from other countries; not only this, but equally important advances and improvement in the treatment and management of non-infectious diseases. The gentleman who would be our governor is insensible to this and would put his faith, no doubt, in the prescription of Doctor Calixtus Bottesham, who, according to Ainsworth, flourished in the time of the Great London Plague. Bottesham informed his patient Blaize that he would give him an "electuary" composed of conserve of roses, gillyflowers, borage, candied citron, powder of letificans Galenia, Roman Zedory, doronicum and saffron. Poor Blaize, in spite of all the high sounding names of sure preventatives and cures from quack doctors, at last fell a victim to the disease, but happily recovered under the rational treatment of good Dr. Hodges.

We have no personal knowledge of Senator Allen's personal views on therapy, or his views on the voting capacity of six hundred chiropractors, and perhaps on the voting capacity of about 3,500 of other kinds. We grant that Mr. Allen has a perfect right to his personal views on any kind of practice; but when it comes to the performing of public duties as the highest executive officer of the state, we have a right to enquire into his record on matters upon which we are most competent to judge. It is not denied that Senator Allen has placed himself in most active opposition to scientific medicine during the entire course of his public service, and it is fair to presume that he will not be more friendly in the future. We desire here to say in the most emphatic manner and with all force we are capable of, that we are not contending for any school or practice of therapeutics, but for the claims of scientific medicine under whatever name may be given it, for the highest public welfare service that trained men are capable of giving.

Since writing the above, we have read in the papers Senator Allen's views on our editorial which appeared in the February number of the Journal of the Iowa State Medical Society on Mr. Allen as a candidate for governor of Iowa. We are bound to respect Senator Allen's views as to the selection of his own physician, and we approve most heartily his expression of gratitude to the physician who restored his child to health; but that has nothing to do with Mr. Allen as governor. Schools of medicine have nothing at all to do with the question at issue. It is not a personal matter of getting patients and treating them by one method or another; it is a question of public-service welfare in which the public is as

much interested—and probably more—than the profession itself. In proof of this we have only to mention a few things which are of common knowledge; the board of health service; the practical disappearance of typhoid fever; the robbing diphtheria of its terrors by antitoxin; the control of small-pox by vaccination; the immunizing of persons infected by the tetanus germs; and the control of many other diseases as above referred to. All these discoveries were made by highly trained members of the real medical profession. We do not for one moment suppose that the limit of medical progress has been reached, and for this very reason we do want most emphatically that the training of young medical men shall be carried farther than at present, not to be lowered. We cannot conceive it possible that an intelligent and honorable body of men, such as belong to the medical profession of Iowa, will consent to place in power men who have it in mind to lower the standards of medical education, nor do we believe the people will consent knowing of such a program.

We often hear persons say that the doctors are always advocating the health and welfare movements for selfish ends and to increase their business; but when we hear a man who is a candidate for governor of a state say these things, we feel that the good Lord intended him for some other purpose. We have heard that Senator Allen proposes to "show up" the medical profession if the profession takes exception to his past legislative course. He is quoted as saying, "I'll see that the public knows a few things before we get through" (meaning the State Medical Society). We shall be glad of his help. We have, ourselves, been watching and publishing their shortcomings and have been trying to correct them through publicity methods, but our contact with this wicked world has made it difficult; yet we have made material progress and we hope, by watchful waiting, to accomplish much more. Permit me to say again that we have no controversy with any school of medicine; we are only struggling to maintain our present standards of medical education and to improve them as far as practicable. We have no controversy with any system of therapeutics or treatment. We recognize the absolute right of every physician to use any class of medicine or methods of treatment he may see fit to employ. We are willing that the law of the state recognize any school of medicine under a fair classification, but we are unqualifiedly opposed to any legislation that shall bring down the standards for the education of physicians and surgeons.

A SUGGESTION IN RELATION TO WORKMEN'S COMPENSATION

It appears that in Wisconsin approximately \$2,000,000 have been paid in compensation for injuries to workmen. Of this amount, \$800,000 was distributed to injured employes, \$400,000 was paid for medical services and \$800,000 as premiums to the insurance companies. Why should 66 cents of the employers' money go to insurance companies for every dollar distributed. This seems to us as the strongest argument for state insurance. The medical profession is willing to render public service for a very material reduction in fees but to do so to enable private companies to pay fat dividends is asking too much. The Industrial Commissioner of Iowa was absolutely right in asking legislation for state insurance. The private companies at once gathered their forces and defeated the measure and are proposing to do so again. The absurd cry of politics is constantly raised when it is proposed to place a reform measure under public control; the same cry was raised when it was proposed to place charitable and penal institutions under a board of control, likewise when educational institutions were to come under a special board. We have heard of no public demand for abolishing the Board of Control or Board of Education. The state of Iowa has asked the employers of labor to compensate their workmen when injured; the state has asked the medical profession to render services to these workmen for less than the regular fees; was it for the purpose of providing private insurance companies with a profitable business? or was it intended as a general welfare movement?

This workmen's compensation legislation is but the beginning of a wider movement in the same direction. As we have previously stated, it will soon include insurance against sickness as well as accidents. The argument we present here is that the medical profession take an active part in this welfare insurance and insist that the state take it over as a proper function of the state and not heed for a moment the silly cry of politics. The responsibility of the politician is our responsibility, and it seems almost criminal for us to hide our shortcomings behind the man we elect to office, for without doubt, he is as honest as we are.

ILEUS DUPLEX

In the Hunterian Lectures delivered before the Royal College of Surgeons by W. Sampson Handley of London, and published in the British Journal of Surgery, October, 1915, attention

is called to a condition of ileus duplex or inflammatory enterocolic ileus, in which a portion of the ileum about three feet above the ileocecal valve and the sigmoid colon at the junction of its ileac and pelvic portions are involved. The condition is illustrated by a plate that shows the inflamed and collapsed intestine that falls below the brim of the pelvis, and its relation to the appendix, a gangrenous condition of which is the most frequent cause of the condition Mr. Handley describes. While appendicitis is the most frequent cause, other infections which primarily involve the intestine below the pelvic brim, may also be a cause. Autopsy may fail to reveal the condition after a general peritonitis has developed, because the local condition may have merged into the general condition. An unexpected obstruction may follow an operation for a postcecal appendicular abscess, and a kink or a band of adhesions may be suspected. An operation for the purpose of overcoming the obstruction may not reveal any such obstructive cause, but by extending the examination into the pelvis the condition first described by Victor Bonney comes into view. He noted that the bowel is flattened like a strap and that it is impossible by manipulation to force gas from the intestine above into the inflamed segment of ileum. Soon the supra-pelvic ileum begins to be distended owing to the block produced by paralysis of the pelvic ileum. The mortality in inflammatory ileus duplex is extremely high. Mr. Handley advocates ileosigmoidostomy with drainage of the intestine by cæcostomy. Intestinal drainage with ileosigmoidostomy gives a fair per cent. of recovery, while ileosigmoidostomy without cæcostomy means very few recoveries.

MALPRACTICE LIABILITY IN INCIDENTAL TREATMENT OF FELON FOR DOMESTIC

(Peterson vs. Phelps [Minn.], 143 N. W. R. 793)

The Supreme Court of Minnesota affirms an order denying the defendant a new trial after the plaintiff had recovered a verdict against him for malpractice. The court says that the close question of fact was the defendant's employment. There was no direct request to treat the plaintiff's finger, no promise of payment for services, and apparently no expectation thereof on the part of the defendant. He had been called to attend the wife of a farmer in whose home the plaintiff was employed as a domestic. As the defendant was leaving the house, having attended to his patient, he found the plaintiff near the door where she and her employer had been discussing her aching finger, and one of them asked the defendant if he thought the trouble was a felon. After looking at it, he gave his opinion that it was not, and suggested salt pork as an application. The next time he

visited the house he examined the finger, opened it with a needle, and gave directions to continue the use of salt pork. The last time, after attending to the patient on whose account he made these three visits, he again inquired about the finger, was informed that it felt worse, examined it, and advised that some one open it with a needle. This was virtually the plaintiff's whole claim as to the defendant's acceptance of her as a patient. He denied that he ever used a needle, examined or prescribed for the finger, except that he gave it a look on the first visit; but the jury having adopted the plaintiff's version, and their finding having been approved by the trial court, the Supreme Court must also accept her testimony as the truth.

The verdict, so far as it embodied a conclusion that the defendant was guilty of malpractice and that the loss of the plaintiff's finger resulted therefrom, was amply supported by the evidence, and it must also be held that the evidence sufficiently established that the plaintiff became a patient of the defendant and was entitled to receive such treatment as the physician possessed of the ordinary care and skill would give.

If the defendant undertook to diagnose, treat, or prescribe for the ailment, his responsibility for failure to possess and use the skill and care of the ordinary physician was not dependant on an express agreement of employment or promise to pay for the services. If he undertook to render services, the law implied an agreement to pay therefor. It has also been held that even as to charity patients and those whose treatment is undertaken without the expectation of pay, the physician must possess the skill and use the care of the ordinary practitioner. The defendant was on a professional visit in the home where the plaintiff was one of the household. She was suffering; the pain interfered with her employment. The head of the house directly or impliedly asked the defendant to examine the finger. Under these conditions his acts in attending to the plaintiff's suffering became quite persuasive of the relation of physician and patient between the two. The jury might well conclude that the plaintiff understood, and had a right so to do, that she was in the hands of a physician who would properly treat the ailment.

In an action for malpractice, in which it is alleged that the defendant did not use skill and care in diagnosing and treating a felon on the plaintiff's finger, and that he did not make the necessary and proper incision in the finger, it is not error to admit testimony of the actual treatment given, including the pricking of the finger with a needle.—(The Journal of the American Medical Association.)

GREAT BRITAIN NEEDS MORE SURGEONS

Sir James Barr, vice-president of the British Medical Association, in an appeal for surgeons for armies going abroad, says that 2,500 will be required and that there will be no course open but to apply to the United States to fill the necessary complement of

medical men if Great Britain cannot produce the requisite doctors. The *Lancet*, in its issue of August 28th, states that the medical schools will be very short of students on account of the large number of young men, of the educated class, who have joined the army. The future will see an increased demand for medical men and consequently a greater prospect of success.

WOMEN PHYSICIANS IN LONDON

The status of a woman physician in England has changed greatly since the beginning of the war. Positions on hospital staffs which have heretofore been held exclusively by men, are now offered to women, and the demand is considerably in excess of the supply. Before the war, for instance, an infirmity physician in the White Chapel district, always a man, received \$500 a year and emoluments while now the infirmity is advertising for a woman physician and offering a salary of \$1,000 a year and emoluments. It is reported that the Woman's Medical School of England has trained 600 women physicians and that 220 students are registered there.

MEDICAL COMPANIES INDICTED FOR FRAUD

The Dr. Miles Medical Company, of Elkhart; the Dr. Whiteall Megrimine Company, of South Bend; the Wright Medicine Company, of Peru; the Binkley Medical Company of Napanee; and the Spohn Medical Company of Goshen, have been indicted for fraud in regard to the "remedies" put out by these companies. This comes as a result of sweeping investigations made by the grand jury of alleged violations of the pure food and drug act.—(The Journal of the Indiana State Medical Association.)

DR. LEONARD G. ROWNTREE GOES TO THE UNIVERSITY OF MINNESOTA

Dr. Leonard G. Rowntree, of Johns Hopkins, has been chosen chief of the medical department of the Medical School of the University of Minnesota, the position held for many years by Dr. Charles Lyman Greene, of St. Paul. Dr. Rowntree enjoys a very high reputation as a medical man, and it will be hoped by all that his work may be eminently successful. He succeeds a man also with a very high reputation for scholarship, as well as for executive ability.—(The Journal-Lancet.)

DR. WILFRED GRENFELL

Dr. Wilfred Grenfell of Labrador, who has contributed so much of late years to welfare movement among the fishermen in the North, and under whose influence a hospital ship service has been organized in the interest of men who have risked so much in the cod fisheries, is reported to have joined the Second University contingent from Harvard University as Senior Surgeon in the European war.

BOOK REVIEWS

POST-MORTEM EXAMINATIONS

By William S. Wadsworth, M. D., Coroner's Physician of Philadelphia. Octavo Volume, 598 Pages With 304 Original Illustrations. Philadelphia and London. W. B. Saunders Company. 1915. Cloth \$6.00 Net. Half Morocco \$7.50 Net.

A systematic work on post-mortem examinations should be welcomed by the profession; by those who may only perform two or three autopsies in a life time, and by those who perform several every year.

The first autopsy made by the young doctor just offering his services to the public may be the beginning of his professional career if the work is done intelligently and with due regard for the feelings of those interested. Much is to be thought about in autopsy work in private practice, and no young practitioner should go to the post-mortem table without due reflection and a proper equipment. The great majority of examinations are made for the purpose of confirming a diagnosis or for the purpose of clearing up a doubtful one. In the great centers of medical science and in the great hospitals, trained pathologists are employed to do this work. The same is generally true in the coroners' offices of large cities. But it may some times happen in small cities and towns the general practitioner must appear as an expert. These examinations are very frequently worthless because of the careless methods and lack of knowledge. To obviate the injustice that may come to interested friends or the wrong that may be imposed on a corporation (insurance for example) and to better serve the ends of justice in criminal cases: the author points out first the fundamental facts to be considered in a post-mortem, then the instruments to be used, and how to use them. In post-mortems in which the general public are interested, especially in criminal cases, the use of hastily extemporized instruments or carpenter tools may be so impressed on the jury that a failure to convict a real criminal may follow, and the physician placed in a very embarrassing position on cross-examination. In this same relation instructions are given as to what should be observed as to the position and appearance of the body, how the dissection should proceed, including each cavity, special regions and organs, also special conditions and lesions, as condition of nutrition, defects, deformities, hemorrhage, infections, etc.

There is a special chapter on medico-legal post-mortems, exhumations and embalming, and on special topics, as abortion, sexual crimes, suicide wounds, gun shot wounds, insurance, electricity, poisons.

Part VI is devoted to photographing, weights and measures, etc.

A short chapter is given to repair of the body, so as to leave it in the best possible condition for the undertaker, thus obviating as much as possible the

prejudice of friends and neighbors against post-mortem examinations.

This is a much needed book and is particularly useful to the physician not experienced in autopsy work.

BONE-GRAFT SURGERY

By Fred H. Albee, M. D., F. A. C. S., Professor of Orthopedic Surgery at the New York Post-Graduate Medical School and the University of Vermont. Octavo Volume of 417 Pages With 332 Illustrations, Three of Them in Colors. W. B. Saunders Company, 1915, Philadelphia and London. Price, Cloth \$6.00 Net. Half Morocco \$7.50 Net.

The recorded work of Dr. Fred Albee in the line of bone-graft surgery has become so well known to the profession, and the methods worked out by him have been so generally accepted, that the systematic embodying of them in a work will be welcomed by the profession. An immense amount of experimental work in relation to the life history of bone-grafts, more or less conflicting, has been offered, but the crux of the matter is, in what manner will the bone-grafts serve the patient in restoring usefulness to diseased or injured bones. Dr. Albee has determined this experimentally and clinically more completely than any other worker.

It has been the writer's privilege to witness numerous clinical demonstrations by Dr. Albee himself, and by others who have adopted Dr. Albee's methods. It is safe to say that this work has passed the experimental stage, and now we come to the question of accurate technic which is so important in securing results.

The first chapter in Dr. Albee's work is a consideration of **fundamental principles** upon which the work rests. Chapter second gives the operative outfit. Commencing the clinical work with chapter three, the author takes up the fundamental principles of how Pott's disease of the spine should be treated; principles which have long been known, but how to accomplish results waited for Dr. Albee to demonstrate with his inlay grafts.

Plaster Paris jackets and braces of different kinds, rest on a Bradford frame have been helpful means of lessening deformity, while the inflamed and softened vertebra were becoming solidified. The more rational methods of bone-graft advocated by Dr. Albee will, it has been abundantly proven, give the desired support.

Direct bone fixation in certain fractures has recently been much discussed. We have probably not reached an exact point of agreement in the matter. Very few surgeons will, however, hold that open treatment of fractures is not occasionally necessary. The method employed should depend upon the surgeon's training and experience. Speaking of the ordinary surgeon who is sufficiently well trained to treat fractures by the open method, except the most skillful, should select the method he is most familiar with or can do the best. Some operators may use

plates who might lack the skill and surgical judgment to do the intramedullary graft of Murphy or the inlay graft of Albee. Dr. Albee has well pointed out how illogical metal fixation is and how much harm may come from it, whether nail, screw or plate. He has shown in much detail the superiority of his own, or inlay method. We should not advise surgeons to undertake the inlay bone-graft operation without close observations at the operating table of a master any more or less than in other lines of difficult surgery; but a careful reading of this book gives an excellent preparation for such observations, and will also furnish valuable suggestions for unusual cases when the general technic has been acquired. Dr. Albee has the happy faculty of expressing himself clearly and has furnished so much detail description and so many illustrations that the methods of work can be easily followed. The mechanical work, for which the publishers are responsible, is of the highest order of book making.

THE CLINICS OF JOHN B. MURPHY, M. D., AT MERCY HOSPITAL, CHICAGO

Volume Four, Number Six, December, 1915, of About 240 Pages, Illustrated. Published Bi-Monthly by W. B. Saunders Company, Philadelphia and London. Price Per Year, Paper \$8.00; Cloth \$12.00.

The clinics presented in this number cover a rather wider range of subjects than many of the preceding numbers. There are two clinic cases of leukoplakic papilloma of buccalis mucosa. These cases are rare enough in a general practitioner's experience that he will welcome a description, and a plan of treatment of a disease difficult to manage.

An interesting case of thyroglossal duct sinus is presented, involving points of diagnosis often overlooked, and thorough operative treatment to prevent recurrence of symptoms. A case of bilateral cervical rib is added to the increasing number diagnosed and operated. Two cases of osteosarcoma, one of the scapula and one of the humerus, serve as a text for some extended observations on this important disease, an error in the diagnosis of which, may have serious consequences to the patient.

A case worthy of careful study is one of cicatricial fixation of the ulnar nerve from an old fracture of the olecranon process, causing serious disability, relieved by a somewhat complicated operation, the steps of which are helpfully outlined by several figures.

In this number are two cases of congenital luxations of the hip joint treated by the bloodless method. There are many other clinical cases of interest, which we cannot specifically mention, which brings this number of the Murphy Clinics up to or above the average of former Clinics.

A TEXT-BOOK OF MILITARY HYGIENE AND SANITATION

By Frank R. Keefer, A. M., M. D., Lieutenant Colonel, Medical Corps, United States

Army, Professor of Military Hygiene, United States Military Academy, West Point—of 300 Pages, Illustrated. W. B. Saunders Company, Philadelphia and London.

The first chapters of this useful book are devoted to the care of troops, recruits and recruiting, personal hygiene and physical training. Under the head of recruits and recruiting, the author brings to the attention of the public and to the medical profession, the fact that not every able-bodied man is suitable for military service, and enumerates certain disabilities that disqualify for the arduous duties of the soldier. He states that in cities only one in three or four recruited are accepted. One very important point, as it appears to us, is that the volunteer and National Guard examinations generally made by civilian surgeons are inadequate; that the per cent. of deaths and disabilities are nearly twice as great among volunteers as among regulars who are selected by trained army officers. This fact should be noted by those who would raise a vast army over night.

Chapter Five is devoted to preventable diseases. Then follow chapters on Clothing and Equipment. Then follow two chapters of the utmost importance to the efficiency of an army viz., Water Supply and Foods and their Preparation.

The sanitation of posts, barracks and transports comes in for careful consideration, including the hygiene and sanitation of marches, camps and battlefields, and the disposal of wastes.

This is the place where we should pay most bitterly in lives for our million men over night enlisted army; it is too sickening to think of.

Dr. Keefer gives us a chapter on the conditions of tropical and arctic service, and finally two chapters on the great demoralizing influences of venereal diseases and alcohol and other narcotics. We are optimistic enough to believe that these conditions will be improved.

The great war that is going on is showing us more than ever before the importance of efficiency in army organization, especially in relation to the medical and sanitary departments. This little book should be thoughtfully read by all medical men connected with our military organization, particularly the medical officers of volunteers and National Guard.

PRINCIPLES AND PRACTICE OF OBSTETRICS

By Joseph B. DeLee; A. M., M. D., Professor of Obstetrics at the Northwestern University Medical School. Second Edition, thoroughly Revised. Large Octavo of 1087 Pages, With 938 Illustrations, 175 of Them in Colors. Philadelphia and London. W. B. Saunders Company, 1915. Cloth \$8.00 Net; Half Morocco \$9.50 Net.

DeLee's work in its second edition, only two years after its initial publication, has been painstakingly revised and brought up-to-date with some

enlargement on certain subjects and the addition of new illustrations.

Some criticism has been made of the surgical teachings of this work, and it may be that the author's views do not coincide with those of some general surgeons. Dr. DeLee states that his views are the results of twenty-one years of experience as a teacher and as a practicing obstetrician, on which experience he may well base his procedures in his own field.

The underlying principles which should guide the student of obstetrics are well brought out, while for the practitioner there is a wealth of detail with many clearly directing illustrations for his more practical consideration.

Part I deals with the Physiology of Pregnancy, Labor and the Puerperium, the Hygiene and Conduct of Labor, and a section on The New Born Child.

Part II gives the Pathology of Pregnancy, Labor and the Puerperium.

Part III is devoted to Operative Obstetrics.

The Appendix gives the author's method of sterilization of rubber gloves, also shows the style of records for case reports used by him, very complete, every detail of normal and of complicated cases being covered.

The introduction to this work is fully as interesting to the obstetrician as the body of the work.

The author considers that the work of an obstetrician should not be limited to merely caring for the pregnant and parturient woman, but that he should be able to cope with any complication which may arise. "It is his duty," he says "to treat all the diseases and accidents that have to do with the reproductive function." He advocates the treatment by such an obstetrician of those surgical or gynecological cases which are so frequently referred to a general surgeon, and to this end rightly demands more thorough training in this field, as well as better obstetrical hospitals and nurses, more assistants trained to this work, in short, all the aids demanded by the general surgeon in his field.

The function of labor, he holds, is today not a strictly normal function, and he deplores the still too large morbidity and mortality among pregnant women, and states that not until the pathological dignity of obstetrics is fully recognized, may we hope for any considerable reduction of the mortality and morbidity of child birth.

Some criticism of his statistics and his advice on Cesarean section has arisen, perhaps justified—however his long experience both in the practical and the didactic field of obstetrics, entitles him to more than an ordinary consideration. He has been of great service as a guide and instructor of students, and any doctor may be assured of great benefit to be derived from a careful reading and digesting of his work.

A TEXT-BOOK OF PHYSIOLOGY FOR MEDICAL STUDENTS AND PHYSICIANS

By Wm. H. Howell, Ph. D., M. D., Sc. D.,
L.L. D., Prof. of Physiology, Johns Hopkins
University, Baltimore. Sixth Edition Thoroughly Revised. Published by W. B. Saunders, 1915. Cloth \$4.

The author and publisher of this text-book of Physiology are to be congratulated on their success in presenting to the medical profession a text-book which so closely keeps the subject matter abreast with the results of recent experimental investigation. Naturally it would be unwise to include the results of all the new experimental work until the results have been reasonably well established and their significance become known by co-operative work. To sift out that which is of definite value to our knowledge, from among the great mass of published work on Physiology, is a tremendous task, but one which Professor Howell with his very wide experience has constantly well done in the revisions of his text. In the present revision the principle changes are to be found in that part dealing with internal secretions and with nutrition.

Here we note the results of the work which has been done in more completely analyzing the action of hyper- and hypo-secretory activity, and the further fact that many of the internal secreting glands are now recognized to be made up of two distinct parts, each showing distinct results in case of their removal or increased activity. Thus the anterior part of the pituitary gland has influence on the growth of long bones and connective tissue, while the posterior has to do with tonus of involuntary muscle and glycogenolysis. Again the cortical portion of the adrenals show relationship to the development of sex organs and are probably the part of the adrenals which are essential to the life of the individual, while the medullary portion shows a sensitizing action upon the myoneural junction of the true sympathetic nerves, and it is through this action that they have influence upon blood pressure, some glycogenolytic action on the liver, and production of such phenomena as would be obtained by the stimulation of the sympathetic nerves. However, even with this more complete study of the action of the internal secreting glands as reported by the author, it is not yet possible to make definite assertions as to what functions they perform in the normal animal, and we are constantly confronted with the statement that "they seem to have to do" with this or that physiological activity.

The changes under the subject of nutrition are of rather a technical character, dealing especially with the physiological chemistry of the amino acids and the nature of the intermediary substances found in metabolism of carbohydrates and fats. To anyone desiring a survey of the present knowledge along these subjects, or any other of the generally accepted facts and theories of physiology, Doctor Howell's text will be found of great assistance.

The book is presented to the profession in its usual high class form, and is to be recommended

both for its up-to-date presentation of the subject, and because of the very interesting manner in which it is written.

PRACTICAL CYSTOSCOPY AND THE DIAGNOSIS OF SURGICAL DISEASES OF THE KIDNEY AND URINARY BLADDER

By Paul M. Pilcher, M. D., Consulting Surgeon to the Eastern Long Island Hospital. Second Edition. Thoroughly Revised and Enlarged. Octavo of 504 Pages With 299 Illustrations, 29 in Colors. W. B. Saunders Company, 1915, Philadelphia and London. Cloth \$6.00 Net; Half Morocco \$7.50.

During the past year Saunders Company published a most excellent work on Pyelography by Wm F. Braasch, the distinguished chief of this division of the Mayo Clinic. It seemed that there would be small room for another book on the same subject. We find, however, on examination, that one book supplements the other. The work of Dr. Pilcher, while covering much of the ground covered by Dr. Braasch, goes much farther in the diagnosis and treatment of the diseases of the urinary tract.

Elementary knowledge is never sufficient for cystoscopy or pyelography, and the amateur should push his knowledge to the expert stage before assuming many responsibilities.

Dr. Pilcher, in the first chapters of his work, points out the indications for the use of the cystoscope, describes the instrument, the relative merits of those in use, the manner of examining the bladder and the ureters. The observations in these first chapters will be of immense help to the worker who is on the road to expert knowledge, as well as to those more experienced.

It is in Section three that the work of Dr. Braasch should come first, as it covers much anatomical ground, only superficially covered by Pilcher. The technic and the accidents and dangers are substantially the same. The four chapters of Section four are devoted to the technic of catheterizing the ureters, both direct and indirect, and the diagnostic value of such examination.

With Section two begins the discussion of the diseases which the technic of the previous sections prepares us to consider. First comes the bladder, the appearance of the normal mucus membrane, the pathologic changes, character of the urine, foreign bodies, etc. Then follows a short chapter on acute and subacute and chronic inflammation of the bladder.

The author states at once in the chapter on tuberculosis of the bladder, that ninety-five per cent. are secondary to tuberculosis of the kidneys. Following tuberculosis of the bladder come ulcers, tumors, stone, diseases of the prostate, etc.

Part Four brings us to diseases of the ureter, where the pyelography of Braasch and the cystoscopy of Pilcher meet, and are so essentially related.

Under Part Five Dr. Pilcher draws attention to an important fact, so often overlooked by a certain class

of surgeons: we refer to the **functional activity** of the **kidneys**. No doubt many a brilliant operation in obstructive lesions has resulted in disaster because the functional activity of the kidney was unknown at the time of choosing a surgical procedure. The author well points out the elements of error in making these tests on account of the influence upon the function of the kidneys of obstructive lesions, and that the observer should not be satisfied with any single test, but employ a number until he is reasonably certain of the condition of the kidney. The technic of the various tests are illustrated.

Part Six considers the diseases of the kidney, which we need not go over but merely remark the extreme importance of associating the work of Dr. Braasch with the clinical observations of Dr. Pilcher. In justice to Dr. Pilcher, we must observe that he has made free use of Mr. Braasch's pyelographs with proper acknowledgment. We take this opportunity to advise our readers who are doing kidney, ureter and bladder work, to possess both these works. The investment would be a good one. It is fortunate that these two books should be issued so nearly at the same time.

Dr. Pilcher closes his book with a discussion of the therapeutics of the cystoscope.

MEDICAL AND VETERINARY ENTOMOLOGY

A Text-Book for use in Schools and Colleges as Well as a Handbook for the use of Physicians, Veterinarians and Public Health Officials. By William B. Herms, Associate Professor of Parasitology in the University of California. Cloth, Price \$4; Page 393, With 228 Illustrations. New York. The Macmillan Company, 1915.

This work on insects fills a long-felt want. It brings to the attention of the medical profession in a convenient form, the great importance of insects not only as pests but more especially as agents in the transmission of serious diseases. Until about a year ago, this special branch of parasitology was not adequately considered by any text-book in any language. Recently several works have appeared—none however surpassing in usefulness to American physicians this work by an American author. After discussing the general structure of insects and their general relationship to disease transmission, there is a detailed discussion of flies, mosquitos, lice, fleas, cock-roaches, ticks, mites and other insects.

Methods for the controlling insect pests and the prevention of their transmission of disease are given in detail. The treatment of insect bites and stings is also given. The work is well written, well printed and well illustrated. A fairly complete bibliography is included. It can be highly recommended for the purposes for which it is designed.

PSYCHANALYSIS—THEORIES AND PRACTICAL APPLICATION

A. A. Brill, Ph. D., M. D. W. B. Saunders Company, Philadelphia, Pa.

To those interested in mental conditions aside

from insanity, this book has a particular appeal. Freud has given us an insight into mental pathology, and a method for obtaining relief to those mentally afflicted, but not insane. The method is that of mental catharsis or psychoanalysis obtained both by "word association test" and "dream analysis." Even though Freud's basic ideal of early sexual trauma may have been abandoned, yet the work is monumental in the pronouncement of a therapeutic method.

LABORATORY METHODS

By B. G. R. Williams, M. D. and E. G. C. Williams, M. D., With an Introduction by Victor C. Vaughan. Third Edition. Illustrated With 43 Engravings. C. V. Mosby Co., St. Louis. Price \$2.50.

This book by Williams Brothers is designed with special reference to the needs of the general practitioner. These laboratory workers have been successful in operating a laboratory in a rural community—namely at Paris, Illinois, and are very familiar with the needs of practicing physicians. The book is intensely practical. It gives a good description of a small laboratory for the physician's use. The book contains practical methods for the examination of urine, sputum, blood, stomach contents, feces, etc.—the tests more commonly needed by the physician.

In way of adverse criticism, it may be said that the authors are, at times, too dogmatic, which has led them to make statements not warranted by facts, as for instance, the following on page 174: "If any germ or element is found to be identical in form and motion with Schaudinn's specific micro-organism, we are then ready to cast aside as useless not only the ink methods, but the dark field differentiation method on which the expert relies," and on page 138 the following statement: "No chemist or bacteriologist can, from the examination of a water sample, recommend it for drinking purposes, and this applies to the expert as well as to the practitioner." The authors are also inclined to be too controversial in their attitude, as shown especially in their chapter on "Water Analysis." It would probably have been better if the section on "Water Analysis" had been omitted since the tests enumerated do not furnish the data that a proper water examination should. It is not sufficient to limit the chemical tests to chlorine determinations. For bacteriological examinations, the culture media should contain lactose, not glucose.

All in all however, the book is a very good one and will well serve the needs of the majority of practicing physicians.

During July the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies: Merck and Co.:

Betanaphthol Benzoate.

NEW AND NON-OFFICIAL REMEDIES

Since publication of New and Non-official Reme-

dies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies:"

Caustic Applicators, Special (Silver Nitrate, 50 per cent.)—Wooden sticks, 12 in. long, tipped with a mixture of silver nitrate 50 per cent. and potassium nitrate 50 per cent. Antiseptic Supply Co., New York (Jour. A. M. A., July 3, 1915, p. 29)

Enzymol—An extract of the fresh animal stomach containing the gastric enzyme in active standardized form and having an acidity due to combined hydrochloric acid. Enzymol is stated to be useful as an application to old sores, ulcers and slow healing wounds. It is said to correct offensive odors, to exert a solvent action on pus, sloughing and necrotic tissue and to impart a healing stimulus. For the solution of necrotic bone and in some abscesses hydrochloric acid is added to the diluted extract (Jour. A. M. A., July 24, 1915, p. 333).

During September the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Cutter Laboratory:

Anti-Pneumococcus serum—Syringes 10 cc.

Diphtheria Antitoxin Globulin—Syringes 2,000, 3,000, 4,000, 5,000 and 10,000 units each.

Normal Serum (from the horse)—Syringes 10 cc.

Tetanus Antitoxin—Syringes 10 cc.

Hoffmann-LaRoche Chemical Works:

Imido, Roche—Ampules Imido Roche.

H. K. Mulford Co.:

Mercurialized Serum, Mulford—Mercurialized Serum Nos. 1, 2, 3, 4, 5, 6.

Schieffelin and Co.:

Radio-Rem—Outfit No. 4.

Standard Oil Co. of California:

Calol Liquid Petrolatum, heavy.

Morgenstern and Co.:

The Council has recognized Morgenstern and Co. as selling agent for Dolomol and the Dolomol preparations in New and Non-official Remedies. The Council is assured that these preparations will be marketed in accordance with its rules.

White Chemical Co.:

The Council has recognized the White Chemical Company as selling agent for Apinol. The Council is assured that this preparation will be marketed in accordance with its rules.

NEW AND NON-OFFICIAL REMEDIES

Since publication of New and Non-official Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies."

Pantopon (*Pantopium hydrochloricum*)—A mixture of the hydrochlorides of the alkaloids of opium, containing 50 per cent. of anhydrous morphine hydrochloride. It produces essentially the effects of opium, but, being devoid of opium extractives, may be used for hypodermic administration. It is probably absorbed more promptly and is free from the nauseant odor and taste of ordinary opium preparations. Pantopon (*pantopium hydrochloricum*) is also supplied as Pantopon (*pantopium hydrochloricum*) tablets 0.01 gm., Pantopon (*pantopium hydrochloricum*) hypodermic tablets 0.02 gm., and Pantopon (*pantopium hydrochloricum*) ampules 0.02 gm. The Hoffmann-LaRoche Chemical Works, New York City (Jour. A. M. A., Sept. 4, 1915, p. 877).

Larosan, Roche—Calcium caseinate, containing calcium equivalent to 2.5 per cent. calcium oxide. In the treatment of diarrheas of infants a useful food is that made from the curd of milk and diluted buttermilk. The preparation of such a mixture of proper composition being difficult to prepare in a private home, Larosan, Roche is offered as a substitute. The Hoffmann-LaRoche Chemical Works, New York City (Jour. A. M. A., Sept. 4, 1915, p. 877).

Betanaphthol Benzoate-Merck.—A non-proprietary preparation of betanaphthol benzoate (see New and Non-official Remedies, 1915, p. 210). Merck and Co., New York (Jour. A. M. A., Sept. 4, 1915, p. 877).

Desiccated Pineal Gland, Armour—The pineal gland of normal cattle, freed from connective and other tissues, dried and powdered. There is some evidence that there is a relation between the pineal gland and some processes of development and growth. The therapeutic use of the gland is in the experimental stage. Pineal gland, Armour is also supplied as Pineal Gland Tablets, Armour, 1/20 gr. Armour and Company, Chicago (Jour. A. M. A., Sept. 25, 1915, p. 1111).

Scopolamine Stable, Roche—An aqueous solution of pure scopolamine hydrobromide protected against decomposition by the addition of 10 per cent. of mannite. It has the properties of scopolamine hydrobromide, U. S. P. It is supplied in ampules, each containing 1.2 cc. (L cc. contains 0.0003 gm. scopolamine hydrobromide). The Hoffmann-LaRoche Chemical Works, New York (Jour. A. M. A., Sept. 25, 1915, p. 1111).

Coagulen, Ciba—An extract said to be prepared from blood-platelets and to contain thromboplastic substance mixed with lactose, 1 gm. representing 20 gm. dried blood. It is said to act as a hemostatic and to be useful in the treatment of local and certain internal hemorrhages. Solutions of Coagulen, Ciba, are used locally, intramuscularly and intravenously. A. Klipstein and Co., New York (Jour. A. M. A., Sept. 25, 1915, p. 1111).

Calol Liquid Petrolatum, Heavy—A non-proprietary brand of liquid petrolatum, U. S. P., said to be derived from California petroleum and to consist essentially of hydrocarbons of the naphthene series. It is colorless, non-fluorescent and practically odor-

less and tasteless. Its specific gravity is 0.886 to 0.892 at 15 c. Standard Oil Company of California, San Francisco, Cal. (Jour. A. M. A., Sept. 25, 1915, p. 1111).

Tetanus Antitoxin for Human Use—Marketed in syringes containing 1,500, 3,000 and 5,000 units each. Cutter laboratory, Berkeley, Cal.

Diphtheria Antitoxin, Globulin—Marketed in syringes containing 2,000, 3,000, 4,000, 5,000 and 10,000 units each. Cutter Laboratory, Berkeley, Cal.

Anti-Pneumococic Serum—Marketed in syringes containing 10 cc. Cutter Laboratory, Berkeley, Cal.

Normal Serum (from the Horse)—Marketed in syringes containing 10 cc. Cutter Laboratory, Berkeley, Cal. (Jour. A. M. A., Sept. 25, 1915, p. 1111).

PROPAGANDA AND REFORM

Filudine—This is a French proprietary sold in this country by Geo. J. Wallau, Inc., New York. It is offered as a remedy for "biliary insufficiency," "hepatic insufficiency," "intestinal dyspepsia," "all affections of the liver (diabetes, cirrhoses, cancer, etc.)," "malaria," "obesity" and "tuberculosis." The statements in regard to the composition of Filudine are unsatisfactory and even contradictory. The Council on Pharmacy and Chemistry reports that Filudine is a mixture of semi-secret composition; that the therapeutic claims are manifestly unwarranted. The name is not indicative of the composition, whatever that may be, and no rational excuse is offered for the combination of liver and spleen extracts (with or without bile extracts) with "thio-methyl arsinat" or "thio-cinnamat" of caffeine (Jour. A. M. A., Sept. 18, 1915, p. 1045).

Globeol—Globeol is sold by Geo. J. Wallau, Inc., along with Urodonal, Jubol and Filudine. The Council on Pharmacy and Chemistry reports that when the description offered by Wallau is divested of obscuring verbiage, Globeol appears to be evaporated horse blood mixed with small quantities of colloid (dialyzed?) iron and mananese and a "dash" of quassia. The Council declared Globeol ineligible for New and Non-official Remedies because its composition is semisecret; because unwarranted therapeutic claims are made for it and because the asserted combination is irrational (Jour. A. M. A., Sept. 18, 1915, p. 1046).

Verlie Gatlin Wrinkle Remover—The Verlie Gatlin Beauty and Wrinkle Treatment was a Denver mail order concern which promised to remove facial blemishes of all sorts and in other ways to make its customers (dupes) beautiful. A post office fraud order has been issued against the promoters of this medical fake (Jour. A. M. A., Sept. 18, 1915, p. 1047).

The Horowitz-Beebe Cancer Cure—Dr. J. W. Vaughan, Detroit, Mich., protests against the unauthorized use of his name in connection with the Horowitz-Beebe cancer cure, Autolysin. A private letter written one week after beginning trials with the cure to Dr. Beveridge was made to do service as a testimonial in a lay magazine (Jour. A. M. A., Sept. 18, 1915, p. 1048).

Strychnine not a Cardiac Tonic—As a result of investigations carried out in the Massachusetts General Hospital at Boston, Dr. L. H. Newburgh concludes that there is no pharmacologic or clinical evidence which justifies the use of strychnine in the treatment of acute or chronic heart failure (Jour. A. M. A., Sept. 18, 1915, p. 1032).

Grant's Epilepsy Cure—Fred E. Grant, Kansas City, Mo., sells an "epilepsy cure" on the mail order plan. Analysis in the A. M. A. Chemical Laboratory demonstrated it to be a bromide mixture containing as its essential ingredients about 15.8 gm. potassium bromid and 0.9 gm. sodium bromid per 100 c.c. (Jour. A. M. A., Sept. 4, 1915, p. 894).

Hydragogin—The Council on Pharmacy and Chemistry reports that Hydragogin (C. Bischoff and Co.), advertised as a "most wonderful diuretic and cardiac tonic," is a shotgun mixture of semisecret composition, marketed under a therapeutically suggestive name and advertised by means of unwarranted therapeutic claims. Hydragogin is said to be a preparation of digitalis, strophanthus, squill and a saponin. The report explains the objection to the administration of digitalis and strophanthus in fixed proportion because of the varying rates of absorption and excretion of those two drugs. It further cautions that since digitalis bodies must often be given to the point of beginning toxic action in order to obtain the full therapeutic effect, it is obvious that the administration of a mixture of digitalis, strophanthus, saponins and squill is especially liable to induce serious toxic effects which cannot be distinguished from the symptoms of the disease (Jour. A. M. A., Sept. 4, 1915, p. 894).

Williams' Syrup of Malt—The Council on Pharmacy and Chemistry reports that Williams' Syrup of Malt is ineligible for New and Non-official Remedies because it is an official article marketed under an unofficial title; because unwarranted therapeutic claims are made for it, and because the claims made are apt to lead the public to depend on it as a curative agent in serious diseases (Jour. A. M. A., Sept. 4, 1915, p. 895).

Micajah's Uterine Wafers and Piso's Tablets—The A. M. A. Chemical Laboratory has determined that Micajah's Uterine Wafers and Piso's Tablets are practically identical—a mixture of dried alum, borax and boric acid. While Micajah's Uterine Wafers are advertised to the medical profession, Piso's Tablets are a "patent medicine." The claims made to the public for Piso's Tablets are silly and mischievous—but no more so than those made to the medical profession for Micajah's Uterine Wafers (Jour. A. M. A., Sept. 25, 1915, p. 1128).

Episan (Brobor)—The Council on Pharmacy and Chemistry finds Episan, recently renamed Brobor, ineligible for New and Non-official Remedies. Neither name indicates the active ingredients—potassium bromid, 44.3 per cent., borax 41.2 per cent., zinc oxid, 3.68 per cent. and amyl valerate 4 per cent. A physician prescribing the preparation under either name would not realize that he was administering borax, and therefore would not take the pre-

caution to watch the intestines and the kidneys. Also, he would not realize that the treatment was essentially a bromid treatment. There is no evidence to show that borax is harmless, as claimed, or that either borax or zinc oxid is a nerve sedative (Jour. A. M. A., Sept. 25, 1915, p. 1130).

COMING MEETINGS

The Chicago Medical Society announces the fifth annual meeting of Alienists and Neurologists of the United States, to be held under the auspices of the Chicago Medical Society, June 19 to 23, 1916, at La Salle Hotel.

The twenty-eighth semi-annual meeting of the Medical Society of the Missouri Valley will be held in the city of St. Joseph, Missouri, on Thursday and Friday, March 23 and 24, under the presidency of Dr. John P. Lord of Omaha, Neb.

The scientific program will comprise twenty-five papers and two orations by men prominent in the profession.

Hotel Robidoux will be headquarters and the sessions will be held in this hotel, as well as the banquet on Thursday evening at 6 o'clock.

A cordial invitation is extended to the profession of nearby states.

SEVENTH ALUMNI CLINIC OF THE COLLEGE OF MEDICINE, STATE UNIVERSITY OF IOWA, IOWA CITY, IOWA, APRIL 11, 12, 1916

PROGRAM

Tuesday Morning, April 11th

- 8:00- 9:30—Clinic in Eye, Ear, Nose and Throat—Dr. L. W. Dean.
- 9:30-10:00—Address of Welcome—President T. H. Macbride.
- 10:00-12:00—Clinic in Surgery—Dr. C. J. Rowan.
- Intermission.

Afternoon

- 1:00- 2:00—Clinic in Dermatology—Dr. J. B. Kesler.
- 2:00- 3:00—Clinic in Pediatrics—Dr. A. H. Beifeld.
- 3:15- 4:30—"The Elective Localization of Bacteria following Intravenous Injection." Lantern slide demonstration. Dr. E. C. Rosenow, Rochester, Minn.
- 4:30- 6:00—Laboratory Demonstration—Anatomy, Pathology, Pharmacology, Physiology, Roentgenology.

Evening

- 7:00- 8:15—Englert Theater.
- 8:15 Smoker—Company A Hall.

Wednesday Morning, April 12th

- 8:00- 9:00—Clinic in Genito Urinary Surgery—Dr. N. G. Alcock.
- 9:00-10:30—Clinic in Orthopedic Surgery—Dr. A. Steindler.

10:30-12:00—Clinic in Obstetrics—Dr. Asa B. Davis, New York Lying-in Hospital.

Afternoon

1:30- 2:30—Clinic in Neurology—Dr. Clarence Van Epps.

2:30- 4:00—Clinic in Internal Medicine—Dr. C. P. Howard.

4:00- 5:30—Clinic in Gynecology—Dr. W. R. Whiteis.

IOWA STATE MEDICAL SOCIETY—SIXTY-FIFTH ANNUAL SESSION, DAVENPORT, MAY 10, 11, 12, 1916

Preliminary Announcement

Headquarters—Hotel Blackhawk.

Eye and Ear section and House of Delegates, Blackhawk Hotel.

General meetings—Burtis Opera House.

Program

Opening meeting May 10, 1916 9 A. M.

Invocation—Reverend Marmaduke Hare, Davenport.

Address of welcome for the city—Hon. Charles Grilk.

Address of welcome for the profession—G. F. Harkness, Davenport.

Response—E. F. Clapp, Iowa City.

Scientific Program*

May 10, 11, 12

The Examination of Spinal Fluid as a Diagnostic Procedure—Julius S. Weingart.

Pyloric Obstruction in Infancy—C. A. Waterbury.

Renal Functional Tests—C. Van Epps.

The Diagnosis of Gastric and Duodenal Ulcer—Edwin A. Merritt.

Some Diseases of the Colon and Rectum too often Overlooked—C. B. Hickenlooper.

"Rheumatism"—John W. Shuman.

Asthma, its Causes, Varieties, and Different Methods of Treatments—Taylor R. Jackson.

The Field of Organotherapy—Carl Stutsman.

Early Recognition of Mental Feebleness—Velura E. Powell.

Some Practical Points in the Treatment of Children's Diseases—G. F. Murray.

Address—Campbell P. Howard.

Address of the Chairman of the Section on Medicine—Granville N. Ryan.

Address on Surgery—J. Rilus Eastman, Indianapolis.

Address on Medicine—Alexander Lambert, New York.

A Study of the Sacro-Iliac Articulation—J. N. Warren.

Paper—W. M. Shirley.

The Pathology of Bacterial Infections—J. R. Allen.

The Iowa County Hospital and Surgery in the Country—J. Frederick Clarke.

Paper—W. S. Conkling.

Extravasation of Urine; Causes and Results—A. A. Schultz.

Paper—F. Earl Bellinger.

The Inter-Relation of Abdominal and Pelvic Pathology—J. H. Schrup.

Paper—H. A. Minassian.

Certain Types of Appendicitis—D. W. Ward.

Address of the Chairman of the Section on Surgery; the Cancer Question—A. M. Pond.

Oration on Medicine—E. T. Edgerly.

Oration on Surgery—Henry H. Clark.

Section on Ophthalmology, Otology and Rhinology

Report of an Interesting Throat Case Complicated by Mastoiditis—C. F. Howland.

Metallic Injury of the Eye with Report of Case—J. G. Roberts.

Occlusion of the Naso-Pharynx—Fred W. Bailey.

Infections of the Lachrymal Sac and Their Treatment—C. P. Cooke.

Practical Points on Refraction—F. W. Dean.

Observations on the Cause and Treatment of Accommodative Weakness with Illustrative Cases—Frederick E. Franchere.

Standardization of Preparation of Patient, Operation and Post-Operative Treatment for Lessening Sepsis and Shock in Tonsillectomy—H. G. Langworthy.

Paper—T. U. McManus.

Paper—F. E. V. Shore.

Paper—Frank L. Love.

Chairman's Address—L. L. Henninger.

THE COMERCIAL EXHIBIT

The commercial exhibit promises to be of high grade and one of the best ever given in connection with the State Medical Society. All of the available space has been sold. It was our intention to give each exhibitor a complimentary reading notice in this number of the Journal, but owing to the fact that it was not possible to secure such notice from all of the exhibitors in time for this issue the same will appear in the April issue.

DR. C. P. HOWARD RESUMES DUTIES AT THE STATE UNIVERSITY

Dr. Campbell P. Howard, head of the department of Medicine at the State University College of Medicine, resumed his duties February 7th after an absence of nearly a year during which time he served in one of the Canadian hospital units. Dr. Howard's unit was made up of men from McGill University of which Dr. Howard is an alumnus. He ranked as mayor and was second in command on the medical side of the Canadian unit at one of the base hospitals in France.

*Official Program will appear in the April issue.

Davenport—"A City Beautiful"

Davenport, Iowa, where the sixty-fifth annual session of the Iowa State Medical Society will be held May 10, 11 and 12, recently achieved national distinction as a result of the efforts of its citizens to create a "City Beautiful." Three years of persistent campaigning by the Davenport Rotary Club have

ways attracted favorable attention from the visitor. But the "City Beautiful" campaign was conducted on the theory that in order to make the city clean and attractive, every unit—that is, every home—in the city should be clean and attractive. How well Davenport succeeded can be judged from the result

of the three years' campaign. The yard and garden contests were begun in 1913, when 2,000 Davenport householders were entered. The result was gratifying in the extreme, and even greater impetus was put behind the task when in 1914, 4,000 Davenporters catching the spirit set about the work, and in the year just passed 7,000 entries in the contest were booked—one person in every seven in the entire city. That is a record of civic pride that it would be pretty hard to equal, to say nothing of excelling; and yet a like accomplishment is possible to any other city with a will to do it.

The purpose of the Davenport Rotary Club in undertaking its "City Beautiful" Contest, was threefold.

First: To create and stimulate in the average man an appreciation of the pleasure, satisfaction and the value in dollars and cents of an attractive yard. The yards of the laboring class are often most unattractive and it was desired to have them made more inviting and to bring into them some order, some cheer and some beauty. Environment is a potent factor in the development of character. A child who grows up in an environment of tin cans will not be the equal of one who grows up



Hotel Blackhawk—Headquarters

wrought such remarkable results that the Ladies Home Journal, the House and Garden Magazine and many other publications have given nation-wide publicity to the Davenport movement. In consequence a new idea has been introduced in municipal circles and other communities throughout the middle west are following Davenport's lead. Prominent physicians of Davenport were leaders in the City Beautiful movement, realizing, as they did, that the campaign for the cleaning of alleys, elimination of refuse, the wiping out of community dumps, the drainage of neighborhood ponds and the planting of waste places would make Davenport not only the "City Beautiful" but the "City Healthful" as well.

Davenport has always been an attractive city. Its well paved streets, its thousands of shade trees, among which great oaks and elms predominate and its well planted and well kept city parks have al-



A Boulevard in Camp McClellan, Davenport's Finest Residence District

"REPORT IN DAVENPORT"

in an atmosphere of grass, shrubs and flowers. It was realized that Davenport never would be generally attractive until the units—the homes—were made so.

Second: To aid the city authorities in creating and maintaining a spotless town. There is a direct connection between the cleanliness of a city and the health of its people.

Third: To awaken interest in vegetable gardens as one of the reasonable, common-sense and practical solutions of the problem of the high cost of living for the workingman.

The rules of the contest were few and simple. The contest was absolutely free. Any one could enter but only one entry was accepted from each family. If an alley adjoined an entire property it was required to be kept in a neat and clean condition and the city ordinance relative to garbage and refuse strictly complied with. No person was permitted to win in any one year more than \$25 in the contest. There were three classes; those who did all their own work; those who did a part of their work and those who maintained a hired man. All the cash prizes were distributed to those who did all their own work. The other two classes got honor prizes.

One of the most important factors in the success of the contest was publicity. After the rules of the contest had been decided upon a meeting of representatives of the local newspapers was called. The plans were laid before them and their support was asked. They gave it gladly. They gave hundreds of dollars worth of space absolutely free, and gave

it with a spirit that made their support doubly helpful.

Slogans were helpful in the publicity campaign, and especially one which was emphasized at every opportunity—"You Win if You Lose." For each individual was increasing the value of his property whether he won a prize or not. Two other slogans that were most effective were: "Be it ever so humble, but make it attractive" and "Make your neighbor



Entrance to Rock Island Arsenal

sit up and take notice." The moving picture houses gave untold publicity also. The following are two of the most effective of the many slides used:

"Flowers are the sweetest things God ever made and forgot to put a soul into." "How many have you in your yard? Join the City Beautiful Contest."

"We believe the boys and girls of Davenport should raise vegetables and flowers rather than Cain. Do you?" "If so, join the 'City Beautiful' Contest."

Prominent Davenport people were interviewed, including prominent workingmen, among them the officials of the leading labor unions; included also were leaders in all lines—doctors, lawyers, dentists and certain of our prominent club women.

Articles were printed in the daily papers on matters pertaining to yard improvement and vegetable gardens. These articles gave ideas and suggestions as to how to lay out a yard and what shrubs, vines and flowers to plant. The articles on vegetable gardens were aimed to help the owner of the property in his problems.



The First Tee, Rock Island Arsenal Golf Grounds

When the entry list closed pictures were taken of the worst feature of each rear yard. It was certain that if the rear yards were made attractive the front yards would take care of themselves. When the judges had made their selection of prize winners a second picture of the prize winning yards was taken from the same point of view. Slides were made and at the time of the awards the two were flashed on a screen. A non-resident judge for both the vegetable gardens and yards was secured to insure absolutely impartial awards.

The names of the prize winners were kept secret. No one knew until his home was flashed on the screen and his name called that he was included in the list of prize winners.

For three years in succession the Burtis Opera House has been crowded on the night of the awards. The cash prizes were given in gold enclosed in chamois skin bags. In addition, each prize winner received a certificate, a number of which have been framed and hung on the walls of some of the attractive little homes of Davenport.

The results of the contest can be appreciated only by a view of the before and after pictures, and even then the pictures do not do the homes justice nor



Entrance to Vander Veer Park, Davenport, Iowa

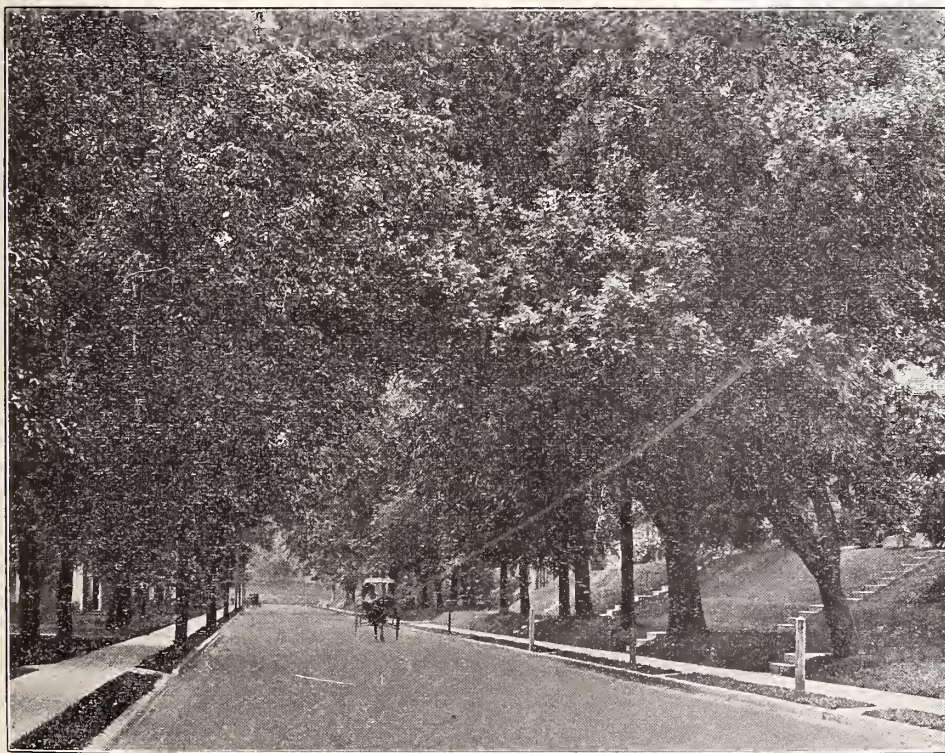
can they show the tone of a rose or the shadings in a bed of iris. The results are not shown alone by improvement in the yards of the contestants. Yard improvement is contagious. As nearly as can be determined every entry has stimulated improvement in at least one other home.

The Davenport Commercial Club, inspired by the results of our contest, inaugurated a so-called "Window Box" campaign and as a result seven thousand two hundred and sixty feet of window boxes were installed in one week throughout our business district during 1915.

The contest was of very material assistance to Davenport's city officials in the maintenance of clean alleys. The ordinances with relation to garbage, ashes and refuse are more nearly lived up to. State officials insist that Davenport is beyond question the cleanest city in the State of Iowa.

There are four substantial reasons why a "City Beautiful Contest" is worth while, all of them being reasons that should appeal to every business and professional man:

First: A "City Beautiful Contest" pays in dollars and cents. Every dollar invested in shrubbery, within reasonable limits where care is exercised in the selection, planting and maintenance will add three dollars to the value of the property within three years. Three dollars in value for one is without



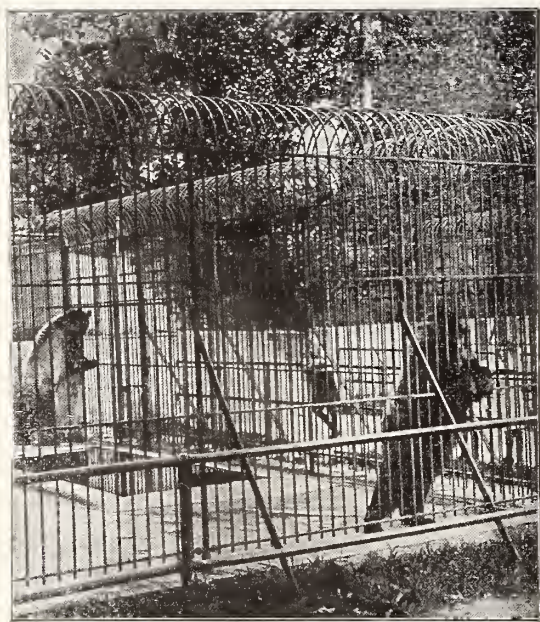
A Few of Davenport's Beautiful Shade Trees

question a good investment. And this is leaving out of consideration the pleasure and the satisfaction in an attractive yard that money cannot measure.

Second: A "City Beautiful Contest" is a potent factor in the making of a clean city. Cleanliness and health are twins. A clean city means a healthy city and health and happiness are also akin.

Third: A "City Beautiful Contest" stimulates interest in home ownership. It emphasizes one of the many advantages of the ownership of a home. Beyond any question a city where the majority of homes are owned is the superior to one where the majority of homes are rented.

Fourth: A "City Beautiful Contest" is a potent factor in the development of a civic pride, one of the important factors in the development of a civic consciousness. And a civic consciousness is a very



Bears in the Fejervary Park Zoo, Davenport, Iowa

decided factor in the success of some cities. A spirit of co-operation, an ability and willingness to pull together has contributed much to the development of some cities over their less fortunate rivals.

Any city can accomplish what Davenport has done.

Davenport has long been famous all over the state for her varied successful industries, for the number, size and soundness of her banks, for the prosperity and activity of her jobbers and retail merchants, but the idea of civic development along all lines, fostered by the Rotary Club, the Commercial Club, the Greater Davenport Committee, the Woman's Club and other of Davenport's promotive organizations, has grown greatly and it is hoped the physicians of Iowa who gather in Davenport for the annual meeting may carry many valuable messages home with them.

The Davenport session will be notable for the manner in which every convention activity has been centered within a small circle. The scientific meetings will be held in the Burtis Opera House. The commercial exhibits in the Hotel Kimball just next

door and the delegates have their choice of staying while in Davenport at the Blackhawk, Davenport, Kimball, Dempsey, St. James or Columbia, not one of which is more than four blocks from the Burtis Opera House.

For the last ten years Davenport has been known as a city with splendid hotel facilities but since the opening of the Hotel Blackhawk, a little more than a year ago, it is admitted that there is no city in the middle west of anywhere near the size of Davenport whose hotel facilities are comparable with the hotel facilities of this year's convention city.

The Blackhawk, the most recent and the most expensive of Davenport hotels, has been described by hotel authorities as "the most complete hostelry in the Middle West." This establishment cost one million dollars and has 225 rooms and 225 baths. Considering the class of this hotel and the service given, the rates are extremely reasonable, ranging from \$1.50 upward. The guest rooms are exceptionally large and light, there is circulating ice water in every room and a wonderful ventilating system.

Then there is the Davenport Hotel, fireproof, with 150 rooms, at rates ranging from \$1.00 to \$3.00; the Kimball with 125 rooms and rates from 75c to \$1.50; the Dempsey with 70 rooms and rates from \$1.00 to \$1.50; the St. James with 85 rooms and rates from 75c to \$1.25 and the Columbia with 35 rooms at \$1.00.

It is predicted by the local committee of arrangements that in the matter of comforts, conveniences and the like the Davenport meeting will set a mark which will be hard to equal in the future.

THE DAVENPORT MEETING

To the Physicians of Iowa:

We, of the Scott County Medical Society, are anticipating the coming of the Iowa State Medical Society in May—and through our entertainment committee are making every preparation to make your visit to the "City Beautiful" a pleasant one.

Particular attention will be paid to the entertainment of the visiting ladies and it is hoped that you will bring your families with you.

A detailed statement of the entertainment features will be published in the April issue of the Journal.

With the Father of Waters at our door, the great Rock Island Arsenal ten minutes from our headquarters, our splendid hotels, and a community filled with hospitable people waiting to give you welcome, we believe that the 1916 session will become enshrined in your memory if you will but "Report in Davenport" on the tenth of May.

The Scott County Medical Society,

By the Entertainment Committee.

DEATH OF DR. RODMAN

As we go to press we are informed that Dr. Wm. L. Rodman, President of the American Medical Association, died in Philadelphia, Wednesday, March 8, 1916, after an illness of two days with pneumonia.

SOCIETY PROCEEDINGS

The Jefferson County Medical Society held their February meeting at the Leggett Hotel, Fairfield, the eighteenth.

Dr. J. F. Herrick, of Ottumwa, gave a paper on The Autonomic Nervous System. Dr. E. T. Edgerly, also of Ottumwa, read a paper on the Physiology of Digestion.

The Linn County Medical Society met March 1st at Hotel Montrose, Cedar Rapids. Fracture of the Os Calcis was the subject of an address by Dr. Benjamin F. Lounsbury, of Chicago. Robert B. Hasner, of Cedar Rapids, spoke on Active Immunization in Hay Fever and Hay Asthma.

The Johnson County Medical Society met in regular session at the University Hospital, February 1st. The program was:

Infections of Joints and Their Management—J. B. Murphy, Chicago.

Case Demonstrations and Lantern Slides—Discussion led by A. J. Steindler.

Accompanying Dr. Murphy, was Dr. J. Tivinen, his eye, ear and nose specialist who also gave a talk before the society in regard to the relation of infections of the upper air passages to so-called rheumatic infections. The visiting physicians were tendered a reception at the Triangle Club by the society.

The Des Moines Pathological Society had as its guest, February 25, 1916, Dr. Campbell P. Howard, head of the department of medicine at the University of Iowa, who has lately returned from France where he was second in command on the medical side of the Canadian unit of one of the base hospitals. Dr. Howard described in his inimitable way his experience in preparing for service and his experiences and observations while in France. He described the arrangement of the various stations for the relief of the wounded from the firing line to the base hospital and related what was done at each station. His description of the organization and management of the base hospital was very interesting and instructive. The various diseases and complications seen were discussed fully and all who heard the doctor received an illuminating insight of one aspect of the European war not easily obtained.

The Polk County Medical Society met in regular session February 29th with this program:

Tumors of the Sympathetic and Chromaffinic Systems—Daniel J. Glomset.

Conditions Requiring the Removal of a Child from the Breast—L. E. Kelley.

The Southwestern Iowa Medical Society, under the chairmanship of Dr. George Mogridge, met in semi-annual session in Creston, February 17th. The southern half of Iowa was well represented and the society was further favored by a representative from Nebraska. Through the efforts of Secretary Dr.

Enos Mitchell, a very able program had been arranged, which in the main, was carried out with satisfaction to all.

Dr. C. A. Weaver, presented the subject, Pituitrin, in a thoroughly competent manner. From the discussion which arose, one would almost be inclined to feel that the running mate of our old friend "Appendicitis" had at last been found.

Some Thoughts on the Various Phases of Typhoid Fever, a paper suitable for most any occasion, was read by Dr. J. C. Olmacher. The essayist handled the subject without fear or favor, and members of the profession could not help but profit after listening to this contribution.

Dr. Tom B. Throckmorton called the attention of the society to, Traumatic Epilepsy, Complicated after fifteen years by Traumatic Cerebral Hemorrhage. The elicitation of the "cracked pot" sound on percussion of the skull, pupillary disturbances, variation in temperature of the two sides of the body, and pathologic toe phenomena were symptoms, among other clinical evidence, which the essayist showed were of importance in differentiating between a post-epileptic confusional state and a confusion resulting from cerebral trauma.

Much to the delight of the society, was a talk on Congenital Deformities by Dr. J. P. Lord, Omaha. The subject was thoroughly elucidated by the use of lantern slides illustrative of the various types of deformities met in children. Dr. Lord presented his subject in his usual forceful manner and the appreciation of the society was evidenced by the generous discussion which followed.

Caesarian Section, by Dr. F. B. Dorsey, proved to be a close competitor with the paper on "Pituitrin" for the honors of the day. Dr. Dorsey was inclined to minimize the gravity of the surgical procedure and also recommended the coining of a word, less ominous than the one manufactured in honor of the great Roman general.

Dr. C. A. Boice read a very practicable paper on The Continuous Sponge in Surgery. The method, as described by Dr. Boice, has been instituted as a routine procedure in the Washington County Hospital.

Last, but by no means least, was a paper by George Brooks, D. D. S. on Dental Infections in Relation to General Diseases. Dr. Brooks, a pioneer in this line of work, went into the subject in a thoroughly scientific manner, and his article contained much pabulum, of a highly nutritious type, such as is badly needed by the medical profession.

The next meeting of the society will be held at Clarinda, some time during the late summer months.

T. B. T.

At the Wapello County Medical Society meeting, February 1, 1916, Dr. C. E. Huband discussed at length the treatment of Dysmenorrhea; he gave a full resume of the different methods of treatment, medical, surgical, electric; the essayist and other speakers appeared to agree on the danger of intrauterine pessaries and in their experience that

dilatation, with or without curettement in the majority of cases gives temporary benefit only. The sufferer, particularly if young, should be given rest during this period and her general condition supervised. It was agreed that some of the usual uterine medical agents, e. g., viburnum, seem to give benefit in some cases.

Uterine Displacements, was the subject of Dr. W. J. Herrick's paper, the causes and symptoms being reviewed. The uterus being a movable organ it does not normally occupy one fixed position. The treatment by pessaries was considered of rather limited value, the surgical procedures of fixation, ligament shortening and repair of tears of the pelvic floor and other injuries, were reviewed. This called out an animated discussion of methods, particularly of the use of the bladder to prevent retrodisplacement, the first step in prolapsus and of the relative importance of fascia and muscles as supporters.

On February 15th, the paper of Dr. L. A. Hammer on Pelvic Infection received much favorable comment for its very concise and yet complete analysis of the subject. The anatomy of the female genital organs explains how infection, starting at one point may invade all the organs and tissues, and how it may remain dormant for varying periods and be awakened by increased functional activity or traumatism. While the tubercle bacillus and organisms from bowel (colon bacillus) and bladder may be the active agents, the most common causes are the gonococcus, and the pyogenic organism introduced during labor and operations. In selected cases active mechanical and surgical procedures have their place and value but it was the opinion of the essayist and the members present that conservative measures, endeavoring to avoid breaking through the leucocyte wall of defense which nature throws up, good postural and other drainage, with rest and supportive treatment give the best results.

At the meeting of the Webster County Medical Society held February 2nd at Fort Dodge, Dr. W. W. Bowen, read a paper on Pelvic Infections in Women.

At the meeting held February 8th to which an invitation was extended the public,—Dr. J. W. Kime, talked on the Iowa Tuberculosis Problem.

MARRIAGES

Dr. Hugh S. Detchon, of Victor, to Miss Savannah Cress, at Iowa City, February 14th.

Dr. E. A. Graham, of Mason City, to Miss Helen Treadway, of Dubuque, at Dubuque, January 30th.

Dr. Francis H. Boucher, of Marshalltown, to Miss Marie E. McKeever, of Hubbell, Nebraska, at Mason City, February 12th.

DEATHS

Alice A. Goodrich, M. D., State University of Iowa College of Homeopathic Medicine, 1899; a practicing physician in Des Moines for twenty-five

years died at her home February 20th from pernicious anemia, aged sixty-four.

Henry J. Hertz, M. D., State University of Iowa College of Medicine, 1909; a practicing physician for six years at Zearing, died at the University Hospital, Iowa City, February 18th, aged thirty-one.

Bartley B. Yost, M. D., St. Louis College of Physicians and Surgeons, 1898; a practicing physician at Center Point, later at Rowley, died at Los Angeles, California, February 7th, where he had gone for the benefit of his health, aged forty-three.

Willis A. Mirick, M. D., Hahnemann Medical College and Hospital of Chicago, 1878; member of Iowa State and Jones County Medical Societies; died while making a professional call March 1, aged sixty-two. Dr. Mirick had practiced his profession at Monticello for over thirty-five years.

Several months ago Dr. Mirick's heart gave him so much trouble that upon advice of physicians he discontinued practice. The improvement under rest was so great that he resumed his practice but was unable to withstand the strain.

Clarence E. James, M. D., College of Physicians and Surgeons, Keokuk, 1880; Fellow of the American



Medical Association; member of the Iowa State and Marion County Medical Societies, died at his home in Durham, February 3rd aged sixty-four years. On January 30th while on his way to see a patient, Dr. James slipped on the icy ground and fell striking the back of his head on a rock, producing a cerebral hemorrhage. Dr. James made repeated efforts to get up but could not and it was some time before he was found and removed to his home. He seemed to have suffered no ill effects from his exposure but

he never fully rallied and passed away from the results of the cerebral hemorrhage.

Dr. James was a native of Iowa having been born at Palmyra, Warren county, December 5, 1851.

In 1881 he was married to Miss Laura Miller of Knoxville, who with an adopted daughter Helen, two brothers and two sisters survive him.

After his graduation in 1880 he practiced for a time at Swan and later moved to Nebraska whence after a short sojourn he located in Durham where for twenty-eight years his incomings and outgoings were a part of the life of the hamlet.

Dr. James was a typical big-hearted, confidential family physician, for whom no sacrifice was too great to prove his faithfulness to those who put their trust in him. One of the crucial tests of a physician's character and ability is the opinion of professional associates and Dr. James enjoyed the honor, esteem, confidence and respect of his confreres to an unusual degree. A large representation of the Marion County Medical Society attended the funeral at Durham and accompanied the family on a special train to Knoxville where interment was made.

Thomas Boyd Morris, M. D., Rush Medical College, 1900; Fellow of the American Medical Association; member of Iowa State and Cass County Medical Societies; also the Botna Valley Medical Association.

February 17th when Dr. Morris was approaching the Rock Island railroad crossing east of Atlantic known as "death's crossing, his automobile skidded and struck head on, the locomotive of a passenger train. The auto was thrown forty-five feet and Dr. Morris ten feet farther. He sustained among other injuries a fracture of the skull from which he never fully recovered consciousness and from which he died at the Atlantic Hospital February 19th, aged forty-nine.

Dr. Morris had practiced his profession at Atlantic for the past fifteen years. He was secretary of the hospital association and director of the Atlantic National Bank, an ex-president of the Cass County Medical Society, and had held several responsible positions in connection with the civic life of his town. In 1903 Dr. Morris was united in marriage to Miss Esther McLean who with their two daughters, his aged mother and four sisters survive his untimely demise.

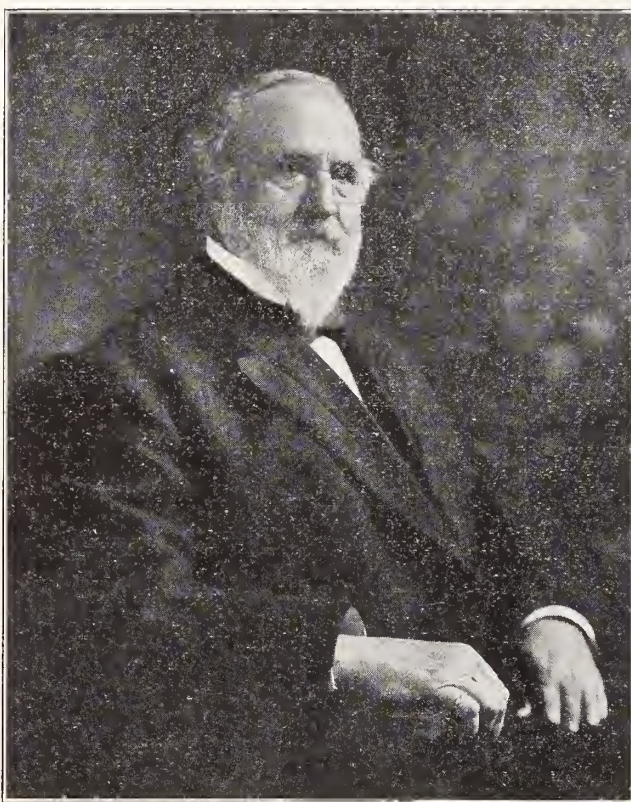
Dr. George W. Coit of Missouri Valley, died at La Jolla, California, January 30, 1916, at the age of seventy-nine years.

Dr. Coit's ancestors emigrated from Glamorgan-shire, Wales, in 1632, and settled in Gloucester, Massachusetts. Dr. Coit's grandfather was a soldier in the Revolution, and his father a soldier in the war of 1812. Dr. Coit himself served in the war of the Rebellion two years. Dr. Coit was of French descent on his mother's side, whose ancestors came to America and located on Long Island near Hempstead. The family name on his mother's side was Place, and the first representative of this family in

this country, served in the Revolution. Dr. Coit's father, Nathaniel Coit, was a merchant in New York for many years, afterwards moving to Bloomfield, New Jersey, where the doctor was born December 9, 1837.

Dr. Coit received his education in the common schools of New Jersey, at the seminary at Cazenovia, New York, and the Wesleyan University, Middletown, Connecticut. He began the study of medicine in the Medical College of Ohio at Cincinnati, and graduated from the Bellevue Hospital Medical College in 1866.

Immediately after graduation, Dr. Coit moved to Missouri Valley where he practiced up to the time



of his death, a period of fifty years. A year after locating in Missouri Valley, married Anna Armstrong Clarke of Hudson City, New Jersey.

The early part of the fifty years Dr. Coit lived and practiced in Missouri Valley was characterized by many hardships and privations. At that time Harrison county was put sparsely settled. The roads were unimproved, and uncertain as to location, and the winters in those days were extremely bitter, characterized by frequent blizzards, which only the early settlers can now remember. Dr. Coit was an able and successful man, and his business grew up about him in a most encouraging and satisfactory way. He was a judicious and careful man in all matters relating to business, and lived in the beginning in a very modest way, only adding comforts and luxuries when his fortune increased to such an extent as to warrant increased expenditures. His foresight and careful methods brought him into close relation with business enterprises with which he from time to time became safely identified, so

that in his later years he was able to employ his time in any way that he saw fit without the fear of financial embarrassment.

When the Fremont, Elkhorn and Missouri Valley Railway was built as a part of the Sioux City and Pacific Railway, Dr. Coit was made chief surgeon, and remained chief surgeon of that road until his consolidation with the Northwestern, when he remained as district surgeon for the western part of the Northwestern system. Very soon after the organization of the American Association of Railway Surgeons, he became a member and remained a member until he resigned his railway connections about 1912. He was one of the originators of the Iowa Association of Railway Surgeons, and was elected President in 1894, and President of the Northwestern Surgeons' Association in 1911.

It was the writer's privilege to have known Dr. Coit intimately for thirty years, and frequently to have come into relations with him in private consultation, and in railway surgical service, until the doctor retired from active practice. Dr. Coit was a man of distinguished bearing, of courteous manner, and while reserved in his manner, had a faculty of impressing people with his character and dignity without giving offense. Dr. Coit was a member of the Iowa State Medical Society, and of the A. M. A., although he never took any very active part in the work of either of these bodies.

Mrs. Coit was a woman of unusual intelligence, highly educated, cultivated, a most interesting companion, and helpful in all that related to the social side of a man's life, and was an unusual comfort to the doctor in all the years of his struggle for a place in the community's affairs.

Dr. Coit had a son and daughter who married advantageously and settled in Omaha, all of whom survive.

The hardships in Dr. Coit's early life, began to tell on his constitution, and for several years past he had spent the winters in La Jolla, California, where he had a winter home.

Dr. Coit was not an ambitious person in the way of crushing those with whom he came in contact, but became recognized as a leader simply by the warmhearted friendship feeling of those who came in contact with him and felt that if honors were due anyone, they should go to Dr. Coit.

On his last trip from his Missouri Valley home to California, he suffered unusual exposure on account of the storms occurring on the way, and this exposure led to an attack of pneumonia from which he died January 30, 1916.

WESTERN SURGICAL ASSOCIATION

Twenty-fifth Annual Meeting, Held at Des Moines,
Iowa, December 17 and 18, 1915

(Continued From February Issue)

The Etiology and Prophylaxis of Carcinoma

Dr. Henry T. Byford, Chicago:

In my paper I adduce clinical and statistical facts

to show that carcinoma is an infection. The germ is found in the surface soil and dirt of populous districts and enters the system in the majority of cases with the food.

Recommendations by way of prophylaxis: 1. Carcinoma should be considered an infectious disease. 2. Precautions against the spread of the infection should be taken by the community as well as by the individuals affected. 3. Foods, particularly fruit and vegetables, should be protected from contamination after their source and in transit. All fruits and vegetables from general sources should be sterilized before being eaten, except such as have a complete covering or hard external surface that can, after a thorough cleansing, be removed. The use of human excrement as a fertilizer should be prohibited by law. 4. The disposal of human excrement in suburban and populous rural and manufacturing districts should be such as to avoid possible contamination of the surface soil. The feces of patients with carcinoma of the alimentary canal and pelvic organs should receive the same attention as those of patients from typhoid or cholera. Women should be taught the infectious nature of normal stools with particular reference to keeping the perineum free from contamination. They should also be taught to spend a considerable portion of their time washing their hands. 5. The number of cats and dogs in populous districts should be restricted, and they should not be allowed to roam about the streets by day and night. The excess should be killed. Means should be taken for the extermination of rats, mice, cockroaches and other vermin. 6. Individuals whose occupations are known to expose them to great risk of infection from carcinoma should be taught that it may get into their systems either through the irritated skin or by way of the alimentary canal. They should be taught to keep the skin free from chronic lesions and should wash their hands very thoroughly before eating; and also to wash and disinfect their hands very thoroughly and change their working garments when they leave their work for the day. All workers in dirt should observe these rules. 7. That all epithelial areas affected with chronic irritation and erosion should be attended to. An attempt might also be made to prevent infection of ulcerated and eroded surfaces in the alimentary canal. Patients with such lesions should of course avoid all unsterilized food that might be contaminated. Whether it would be useful to give a large dose of trypsin or something with a similar catabolic or germicidal action once or twice daily in cases of ulcer of the stomach, or a pint or more of a solution of acetozone or alphonzone, or some other non-poisonous substance that might be found to have a destructive action upon carcinomatous cells and parasites, is a question that deserves consideration. 8. Municipal authorities should put carcinoma upon the list of diseases to be reported in order that the patients may be traced and taught how to take care of themselves and their infected discharge, and that none of those living with them be allowed to handle foodstuffs for the

market. 9. The blood of patients with carcinoma should be exhaustively studied with reference to the discovery of something that will increase immunity, for until we learn more about the germ, the establishment of immunity would seem to afford the best hope of preventing infections and recurrences. 10. The time would seem to be ripe for teaching the public something concerning the erroneous notions about diet that are prevalent among the idle rich and prosperous poor in order that they may stop manufacturing the serious forms of gastro-intestinal disease that have of late years shown such an alarming increase in frequency, the seeds of which are sown in adolescence and the fruits of which are harvested at maturity, and in senescence. In this way the danger of infection by contamination might be greatly diminished. 11. Women who have not born children for several years should be warned of the danger of developing carcinoma, and should not only be on the lookout for symptoms but should submit to a pelvic examination at least twice a year until it is evident that their mucous membranes are healthy and are remaining so.

The Relation of Skin Transplant to Carcinoma Especially to its Recurrence

Dr. A. C. Stokes, Omaha, Nebraska:

Conclusions: Skin grafts on the surface of wounds from which carcinoma has been detected should be thin grafts, because they carry no blood vessels or lymphatics with them, and for the further reason that they do not completely cover the surface of the wounds. The Thiersch graft should be used on fresh surfaces and the Reverdin graft on granulated surfaces. The recurrence of carcinoma in skin grafts is comparatively rare, and these grafts seem to exert a special influence against the return of carcinoma.

Epiploitis Following Operation for Inguinal Hernia

Dr. William Hessert, Chicago:

Diseases of the omentum are rather rare, and are divided into tumors and inflammations. The latter may or may not be related to some preceding operation, usually herniotomy. Post-operative epiploitis was first described by the French in 1892 and by the Germans in 1900.

The simple inflammatory hyperplastic type is the one most commonly observed. The free interval after operation before the onset of symptoms, is five days to three years, but the average time is three to four weeks. The type of inflammation which develops in the omentum, whether acute, sub-acute or chronic, depends upon the virulence of the infection or the degree of mechanical irritation by the ligature material.

There are four main factors involved: 1. The ligature material. 2. The manner of ligation. 3. The condition of the omentum at the point of ligation. 4. Infection.

In most cases the trouble has been caused by silk ligatures employed in ligating omentum during the performance of herniotomy. The complication may

even arise following the use of absorbable catgut. Absorbable material will cause no trouble if sterile, whereas non-absorbable material may cause trouble even when sterile through mechanical irritation.

Ligation of the omentum *en masse* or by figure-of-eight, and also section through diseased omentum is a frequent source of the inflammatory complication. Infection is probably the underlying factor in the great majority of cases, and its effects are enhanced by unabsorbed ligatures.

In the very acute cases the symptoms are those of acute peritoneal inflammation. The subacute and chronic cases are characterized by the development of a mass in the abdomen, which is superficial, tender, painful, dull on percussion and does not move with respiration. There is more or less fever, and an abscess frequently develops which is drained or opened spontaneously. The herniotomy wound almost invariably remains clean.

Some very chronic cases may give rise to symptoms closely resembling carcinoma of the stomach or intestines. The tumor found in such cases is a dense fibrous mass with the gross appearance of cancer. In more acute cases the omentum is either a turgid inflammatory mass riddled with abscesses or a mass of inflammatory induration, with several abscesses in which are frequently found the offending ligatures.

It is safe in many cases to follow an expectant plan of treatment, for quite a few cases recover spontaneously. The main thing is to make a diagnosis. Abscesses should be evacuated, or in favorable cases the entire inflammatory mass should be removed.

Post-operative epiploitis can be prevented by observing the following technic: (a) Faultless aseptic and operative technic. (b) Avoid the use of non-absorbable ligature material. (c) Employ fine catgut and tie off small portions of tissue only. (d) Do not ligate *en masse* nor through inflamed omentum. (e) Never remove omentum unnecessarily.

First Aid

Dr. Joseph G. Bloodgood, Baltimore:

What is first aid? The military surgeon of today says that first aid is what a surgeon would do if he had a chance to be there at the moment of injury with the things that are there, but in the great majority of cases the surgeon cannot be there. First aid is what a surgeon is willing to have someone else do with the things that it is possible to provide and to have there at the time of the accident until the patient can be gotten to a surgeon. At the front there is the soldier with his first aid package, and the medical profession of the army tells the soldier what he can do for his comrade if he is shot. Near the firing-line is the hospital corps with a few surgeons, and the medical profession of the army tells what the hospital corps man can do, but he can do very little more than the comrade of the soldier; he carries a few more things with him than the soldier carries. There is a difference of opinion whether the hospital corps man should carry morphia or

not. The consensus of opinion is he should carry morphia, so that the wounded soldier can get morphia if he needs it. It is also felt that the hospital corps should carry iodine, but the soldiers should not be given iodine. Then there is the surgeon on the firing-line. He should be restricted in what he should do there with what he has there just as much as the comrade and the hospital corps man. The soldier on the firing line and the hospital corps man cannot do as much as the surgeon at the base hospital. He is given things to do that it is possible for every surgeon to do with a moderate amount of training under the environment of a position behind the firing-line, with the materials that are possible to put behind the firing-line.

First aid measures consist of how we should cover a wound, how we should put an injured arm or leg at rest, and the problem of transportation. Wounded soldiers should be transported to some place where they can have the services of the most experienced surgeon with the environment of a modern hospital, so that anything can be done that needs to be done, and the consensus of opinion is to move the base hospital as near the firing-line as the modern gun will allow. The only thing that puts the base hospital back is the artillery.

In civil life, what shall we teach the ordinary individual to do with the things that we can provide? In the ordinary household, in automobiles, on the streets, in our electric cars, on our railroad trains, the problem is a more difficult one. On some railroads there is a long distance between stations, and on other railroads the distance is short. In civil life, if you can bring the injured person to the environment of an experienced surgeon in a short time, the best thing to do is to do nothing, so that first aid in civil life, is according to the position of the injured, the distance between the modern hospital and place of injury, and the difficulty of transportation.

Why do we need a board of standardization? There is no consensus of opinion amongst those who are teaching first aid as to what should be taught. This must be standardized. The danger has been that we teach the individuals too much. We cannot standardize first aid unless surgeons are willing to think about this and give their opinion as to what they think the ordinary individual should be allowed to do with the things that are given him under the environment of peace.

Intestinal Stasis

Dr. B. B. Davis, Omaha, Nebraska:

In my conception of intestinal stasis the condition falls naturally into three classes: 1. Cases due solely to mechanical causes. 2. Cases due entirely to weakened and dilated intestines without mechanical obstruction. 3. Cases primarily of the second class, but with adhesions resulting from subinfections.

Regarding the first class there is very little to say. If inflammatory adhesions, persisting bands, membranes or kinks produce enough mechanical interference to the progress of the intestinal current to result finally in a weakening of the intestinal walls, and a gradual lessening of peristaltic efficiency, the result will be intestinal stasis with all the varied

train of symptoms that we have learned to expect. In such cases the etiology is plain and the treatment is not a subject for discussion. The mechanical cause of the stasis must be removed surgically, and if this is done effectually and reasonably early, the results are perfect restoration to health and normal function.

The second class is the one towards which I wish to direct attention. Normally the food is taken into the stomach with appetite, the saliva and gastric juice are secreted in sufficient abundance, peristalsis is started, the bile and pancreatic juice appear at the correct stage of the procedure, the intestinal juices bear their share, sufficient gas is formed to aid materially in giving safe passage of the food along its way. Even the normal tonicity of the abdominal muscles is an important factor in helping the intestinal contents along the journey to the large bowel. When the colon is reached the food is ready for absorption. Finally the residue is deposited in the descending colon which is to be considered a mere reservoir. Defecation is the final act which leaves the colon ready to receive the next installment. As long as all the functions are perfect, the process of digestion, absorption, and discharge of the waste material goes on in a natural way, none of the organs concerned in the process is being overworked, weakened or exhausted. A perfectly sane and well ordered life and dietary ought to go on a lifetime without a hitch.

That short circuiting or colectomy has a large place in the treatment of such cases, I am not prepared to believe. It is not a procedure that appeals to reason. The condition is entirely one of perverted function brought about by a long series of abuses. The condition in the severer cases affects the whole alimentary canal from stomach to anus. In order to restore in part the weakened intestinal walls increased nutrition is sorely needed. The proposition to excise that portion of the colon which has especially to do with absorption of the nutrients seems theoretically to be about the worse thing that could be suggested. It is my opinion that very soon those surgeons who have permitted themselves to be stampeded into short-circuiting operations and colectomies for intestinal stasis will be wondering why they could ever have expected benefit to arise from such an illogical procedure.

The real ray of light comes from prophylaxis and from the recognition of the early stages of stasis before irremediable changes have occurred. Any of these stages taken early and treated carefully and rationally might be restored to normal again. A weakened intestinal musculature can be made a normally strong intestinal musculature. A dilated and elongated intestinal canal may be restored to its original lumen and length. A stagnant bowel teeming with toxic material may be made to empty normally.

The third class of cases of intestinal stasis, those where after long existence of the stasis there occurs a migration through the intestinal walls giving rise to a subinfection and the production of adhesions which cause obstructive symptoms, naturally require surgical procedures. Such procedures should be limited to simple relief of the obstruction.

Intestinal Stasis, Ptosis and Constipation

have assumed today an importance which the medical profession never before imagined. This is because the toxemia which may accompany these conditions, with its train of detrimental results, has been demonstrated, while the fact that cases may be treated successfully by the physician, is recognized.

It has been shown that Ptosis, Intestinal Stasis and Constipation do not necessarily occur together. Each may exist by itself, or any degree of combination of two or all may obtain. The essential matter is to prevent the toxemia by preventing an abnormal delay in the passage of material along the gastro-intestinal tract and by hindering development of bacteria.

The medicinal remedy, *par excellence*, is, by common consent, LIQUID PETROLATUM, *Heavy*, administered early in the case and persisted in until a cure is had, or until it is demonstrated that surgical conditions prevent results.

We therefore wish to call the attention of the medical profession to

Liquid Petrolatum, Squibb

(*Heavy, Californian*)

as especially suited to relieve constipation and to prevent alimentary toxemia. It is colorless, tasteless, neutral and non-irritating. It exceeds the quality requirements of the United States Pharmacopœia and the British Pharmacopœia, and is the purest and best mineral oil to be had. It is superior in essential respects to similar products, whether of Russian or American origin.

E. R. SQUIBB & SONS, New York

CHANGES OF LOCATION

Dr. Byron Lewis, of Ridgeway, has purchased the practice of Dr. W. L. Griffin, of Floyd. Dr. Griffin has recently removed to Charles City.

Dr. J. W. Brown, of Clearfield, has sold his practice to Dr. D. W. Reed.

Dr. Eli Browning, of Iowa City, has located at Kinross.

Dr. Malcolm Campbell, who has been doing post-graduate work at Boston, will practice with his father Dr. S. A. Campbell of Malvern.

MEDICAL NEWS

Dr. C. G. Clark, of Atlantic is recovering from an attack of pneumonia.

Dr. J. J. McWilliams, of Charter Oak, has been very ill with hemorrhage of the stomach.

Dr. O. L. Chaffee, of Waverly, recently underwent an operation for stomach and gall bladder trouble.

Dr. and Mrs. Donald Macrae, of Council Bluffs, have left for a three months trip through the south.

Dr. John W. Cogswell, health officer of Iowa City, ruptured an ear drum while diving in the swimming pool of the university gymnasium February 9th.

Dr. Henry Matthey, of Davenport, surgeon-in-chief of the military hospital at Braunsberg, East Prussia, on account of efficient service, has been decorated by the German Emperor.

Dr. F. S. Clarke, formerly of Le Mars, has associated himself for the practice of pediatrics with Dr. Newell Jones, of Omaha. Dr. Clarke has been in New York City doing special work in pediatrics.

The physicians of Oskaloosa have organized under the name of The Oskaloosa Hospital Club, for the interests of the hospital and mutual benefit. Dr. S. W. Clark was elected president and Dr. J. G. Roberts, secretary.

Dr. Donald Macrae, Jr., Council Bluffs, announces that Dr. W. Eugene Wolcott late with Dr. Fred H. Albee, of New York, will be associated with him in

general surgery, giving special attention to bone graft and orthopedics.

Dr. and Mrs. P. J. Kaynor, of Ames, recently celebrated their seventieth wedding anniversary. Dr. Kaynor practiced medicine in this state for over forty years. The doctor is now ninety-five years of age and his wife eighty-nine.

Dr. Will D. Runyon, assistant superintendent at the Oakdale Sanitarium, has resigned to accept a position as surgeon and superintendent at the Union Printers' Home at Colorado Springs, the largest institution of its kind in the world.

The appreciation of the work of Dr. H. V. Scarborough as superintendent of the Oakdale Sanitarium, is shown by his re-election for another four years by the board of control. The sanitarium has been enlarged under his administration in equipment and number of buildings.

At the annual session of the Federation of State Medical Boards of the United States, held in Chicago, February 7th, Dr. Walter L. Bierring, of Des Moines, was elected secretary-treasurer; Dr. David A. Stickler, of Denver, was elected president and Dr. Walter H. Bowers, of Boston, vice-president.

A farewell reception was given Dr. Runyon, who has been at the Oakdale Sanitarium for three and a half years—all of the patients who were able to attend were present. As a mark of appreciation on their part, Dr. Runyon was presented with a beautiful Masonic ring, bearing the inscription, "From Oakdale patients, February, 1916."

In the orthopedic ward of the hospital at the State University of Iowa, 147 crippled children have been treated under the Perkins law within the last five months. Half the number have been sent home, the great majority of them with powers of life and limb which they did not have when they came. There are now seventy children in the ward which occupies two and a half floors in the new west wing of the main university hospital. With the exception of two or three all of these are receiving free treatment from the state. Sixty-five per cent. of the cases, according to Dr. Arthur Steindler, orthopedic surgeon in charge, are the result of the infantile paralysis epidemic which passed through Iowa some five years ago.



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ADDRESS ON SURGERY*

Some of the Later Adaptations of Gastro-Intestinal Surgery

C. A. L. REED, M.D., F.A.C.S., Cincinnati

Mr. President, Ladies and Gentlemen—I beg to assure you that I entertain the heartiest possible appreciation of the invitation to address you upon this occasion. I only fear that my meager offering will be an inadequate recompense for the sacrifice of time which you make in listening to me. However, in coming before you I feel that it is incumbent upon me rather to bring my own personal message, instead of what would probably be of more value, and that is, a more or less comprehensive study, clinical, literary, and otherwise, of some specific subject.

I want to talk to you today about some things that have been more or less perplexing to me, and possibly to some of you, in my work in gastro-intestinal surgery. I feel that possibly I may be recalling reminiscences on the part of some of you when I mention a class of cases of about this type: A patient is suddenly seized with pain in the right lower quadrant of the abdomen. The pain is intense, and the patient literally shrieks for relief. His family physician is called and finds some very constant symptoms. There is not only pain, but extreme tenderness on touch. There is muscular rigidity over the entire quadrant. This tenderness localizes at the classical mid-biliary point. There has been obstipation, there is now some vomiting. After looking this complex of symptoms all over, the doctor hurriedly, and not any too hurriedly, comes to the conclusion that the patient has appendicitis. He sends for the surgeon, the surgeon arrives and looks the case over, finds that cold packs and anodynes have failed, and the patient is clamorous for relief. The surgeon at once very properly concurs in the diagnosis of the attending physician, the patient is "railroaded" to the hospital and is very promptly subjected to an operation, put upon the table, placed in Trendelenburg position, and the classic incision made.

After fishing around for a little while a perfectly normal appendix is found, or an appendix that is possibly sufficiently catarrhal to serve as a rational explanation to the waiting friends. The patient is finally discharged and goes home, and after the lapse of a few weeks or months or a year or so, has that constitutional lack of consideration to get up another attack of appendicitis and no appendix to have it with, and then the surgeon is again called and busies himself with explanations that are gotten up under the spur of the moment and are a trifle embarrassing, and possibly as little convincing to the patient and the patient's family as they are to himself.

This reminds me of a little incident that happened at the reunion of the Grand Army of the Republic, where the old boys in blue had been gathering about the camp-fire and telling of their advances and victories and triumphs in the gloomy days of the country. They were being addressed by the late Gen. J. D. Gordon, who was going over his celebrated address on "The Last Days of the Confederacy," and in one passage he came to a point in his narrative at which he had occasion to state that Sheridan's forces had retired in front of him; and just pausing there and remembering these stories that had been going on around the camp-fires all through the years, he stepped forward and said, "Look here, boys, once in a while we *did* retreat!" So now, boys, once in a while we have seen cases of this kind—cases about as perplexing as the one to which I have alluded.

Some seven or eight years ago I had one of these cases sent me by a neurologist, who called me up and said: "This man has a fulminating appendicitis, and I wish you to come at once and take immediate steps for operation." I did so, concurred thoroughly in the diagnosis, hurriedly transported the man to the hospital, and when about ready to make incision the doctor said: "You can not put this man in the Trendelenburg position, he is just recovering from apoplexy, and if you put his head down you will get up a degree of circulatory disturbance that will bring about a return of the trouble." "Very well," I replied, "I will operate on him sitting up." So I placed him in a semi-sitting position, made incision,

*Read before the Sixty-fourth Annual Session, Iowa State Medical Society, May 12, 13, 14, 1915, Waterloo.

pulled out the transverse colon, and in a little bit there appeared the stomach, then after a while I fished down in the bottom of the pelvis and pulled up the cecum—very large, very flabby, very sacculated, very mobile, and attached to it was the same old healthy appendix. And then a bright light dawned upon me and I said to the anesthesiologist, "Put that man's head down if it splits wide open." He put it down, and as the order was carried into execution I saw disappearing from view the stomach and the transverse colon and the omentum, all dropping down towards the diaphragm, where they had been in all my previous operations of the kind, and where I consequently never before had seen them. And then there dropped right down into the field of operation, right in under my incision, the mobile, flabby, sacculated and blue cecum with its appendix attached. Of course I removed the appendix, as is the perfectly proper and gentlemanly thing to do under the circumstances. But I then and there saw that I had an explanation of the cases that had brought me embarrassment through all the preceding years. I saw that, as a result of displacement of the stomach, colon and cecum, the condition we had been contending with was not actually a pain located within the appendix, but a pain located just at the appendix probably by the strangulation of some sacculated portion of the cecum or possibly of a convolution of some sulcus of the ascending colon—I do not know what I had for it all disappeared by the time I saw it; but it was perfectly apparent to my mind that that was the essential underlying pathology, and it was equally apparent that my failure to relieve the essential underlying pathology in all my previous cases, explained why those previous cases had persisted in having appendicitis with no appendix to have it with.

So, with the patient's head still down, having relieved the condition below and making sure there were no binding adhesions, I made a transverse incision from the left costal margin just below the ensiform over the right costal margin, then obliquely down so that altogether I had an incision of about six inches, possibly seven. With a little flap-like arrangement which was then made, I turned this arrow, then, peeling back the epigastric fat and peeling back the peritoneum from the under surface of this and letting the peritoneum go, I brought the colon up where it belonged and did what I have designated and what I believe I have properly designated as a retro-peritoneal implantation. In other words, I put the colon back where it belonged, I relieved its obstructive angulation, I implanted it in a way that it would remain where it had been placed,

and at the same time by including the lesser omentum in this implantation I secured an equally accurate fixation of the stomach. In other words I did what in a certain sense could be designated as a gastrocopexy, the technic of which you will find described in the Journal of the A. M. A. of a few years ago.

From that time on I have had no difficulty about these cases, which I believe may be correctly designated as cases of pseudo-appendicitis. I have arrived at the point where the making of a diagnosis before operation is not so difficult, because by reason of the case cited I was prompted to begin a study of the ptotic displacements, with the result that even in these days of dependability upon the X-ray, which in these acute conditions is essentially impractical, in most cases with absence of distention, I am enabled to make the diagnosis. If you will just study those cases sufficiently, handle them often enough, percuss them frequently and get used to the note of resonance that comes from the stomach, cecum and transverse colon, you can locate these viscera with a reasonable degree of accuracy. But the one essential clinical symptom that will enable one to distinguish the difference between a pseudo-appendicitis and an actual infective appendicitis, is the absence of the initial chill and the subsequent elevation of temperature. The essential septic symptoms are absent. Then, of course, you have blood analysis and the leucocytosis to fall back upon.

Now, I do not mention this class of cases to criticize adversely the policy of operative interference under these circumstances. On the contrary, I believe that all of these cases should be operated upon, that they should be relieved by surgery and relieved then and there, because back of this particular strangulation you have lurking the possibility of a subsequent infection even if it has not already occurred. It is important that these cases, which are more or less evidenced by chronic invalidism, should be relieved, and this after all is the very opportune moment to do it.

But the question is, what operation shall we do? Certainly not the memorial appendectomy that it was my custom to do before doing this particular operation, because, as previously stated, this does not relieve the essential underlying pathology of these conditions. Therefore operative interference in these cases should be more extensive and should involve as nearly as possible a replacement of the organs *in situ naturalis*.

There is another class of cases which we sometimes encounter. I had one but recently. The patient, residing in the south, was suddenly taken with violent stomach symptoms. She went to a

neighboring city for the relief of her immediate symptoms, which seemed to be very urgent. She gave the history of repeated attacks of practically the same character: She had a long history of hyperchlorhydria, she had a long history of slow gastric clearance, sometimes on one day vomiting that which she had taken the previous day. There was no history of blood in the vomitus, nor could there be obtained any history of occult blood in the stools. But she had had a number of these attacks and they had reduced her to a state of chronic invalidism which was accentuated by a persistent constipation. It was in this condition and with one of these attacks that she was taken down in Tennessee and was removed to a hospital in Chattanooga, where she remained for a time, and was then, after subsidence of the acute symptoms, brought on a cot to Cincinnati.

I tried giving the patient a little solid food and it immediately resulted in an attack of excruciating pain and retention, with vomiting after fifteen hours. I gave her some barium, and it was in the stomach after twenty hours. The pyloric orifice was abnormal and there was no detection of the barium in transit through the duodenum. After a little longer treatment with gastric rest I operated upon her, having previously explained that this was obviously a case of pyloric ulcer with resulting pyloric insufficiency, and that a gastro-enterostomy should be done. My explanation was accepted, I made it perfectly lucid, drew a picture and told them exactly what was the matter, exactly what could be done, and they could see the whole thing in advance. The patient went on the operating table, I brought out the stomach, and there was not the slightest hint of an ulcer anywhere, the pylorus was perfectly normal. What was the matter? I found what I might have detected by other means if I had followed up the barium indication—I found a redundancy of the colon to the extent of three and one-half feet, it was piled upon itself in the bottom of the pelvis. I found extreme traction on the peritoneal attachment of the hepatic flexure to the lower segment of the duodenum, with resulting pressure and evidences of chronic dilatation of the duodenum. In other words, here was another counterfeit presentiment of a disease that did not exist. Here was a pyloric insufficiency, the result absolutely of mechanical conditions within the abdominal cavity. These were corrected, I congratulated the patient that we had all been mistaken, we were all very happy over it, she was getting perfectly well without any symptoms. And fortunately, in view of what we did find, I was able to make an explanation that was satisfactory to the patient as it was to myself. And

yet I confess that it is a little bit awkward to have to make these dissenting explanations in a post-operative way.

We have found some other things recently that I mention with a slight degree of hesitancy, because the work has not yet been carried to its final fruition, and because, so far as its present status is concerned, it seems to be absolutely revolutionary in its tendency with respect to certain established and widely accepted views of the profession. Following the accidental discovery of gastropotosis in the case first mentioned, I began looking out for that condition, and very soon found a good many of them that did not have pseudo-appendicitis as a complication, but they did have various constitutional conditions of a toxic character instead. And I began correcting these, and after several years of this work, something like a year ago next month a patient came into my office and she said, "Doctor, I happened to be in the city today and just came in to see you; there is nothing the matter." I did not know her when she came in, which she resented; she said, "Don't you recall me?—I am so-and-so,—and I came down just to tell you how well I am; I haven't had any more of those headaches, I don't have any more dyspepsia, I don't spit up my food, and I am no longer constipated, but have two or three movements of the bowels every day, and, doctor, I haven't any more epilepsy." I said, "I am very much astonished to know you ever had epilepsy!" "No," was the reply, "I didn't tell you because I thought you would not operate on me." I then took her history again and found that previous to the operation detailed, she had been having an attack of *petit mal* as often as once or twice a week, rarely having an interval of three weeks. Eighteen months had elapsed and she had had no recurrence. It seemed merely very fortunate, and then I recalled that in these previous years some other patients had told me that they had had epilepsy, and at the time I thought so little of it one way or the other that I had generally failed to record it. But I found the records of four such cases and wrote to them. Some had had a few attacks following this operation of retro-peritoneal implantation of a ptotic colon. But some of them had cleared up, some such apparent cures being of three years' standing.

It seemed to me to be a very peculiar circumstance, because I was totally at a loss to associate this condition with the more or less accepted but nevertheless thoroughly chimerical pathology of the disease—that it is presumed to be located somewhere in the head. I reported these cases, and there were brought me certain other cases of

epilepsy for operation. And then I began to wonder what I should find and what the results would be. Very much to my surprise, I began finding certain definite pathological constants in these cases, all of them located within the abdominal cavity. These cases all came to me because they had, like my first case published in our little local journal, begun with constipation and after the constipation had existed for some time they developed epilepsy. And then from the time epilepsy had developed up to the present they invariably found that the epilepsy was always worse when the stomach and bowels were out of fix, and the only way they could minimize the attacks was to keep the bowels open with purgatives and by such other means as they had at hand.

What have I since found? In every one of those cases I have found mechanical obstruction to the extent of inducing intestinal stasis; I have found in every one—exactly one hundred per cent. of them—a peri-duodenitis with chronic dilatation of the duodenum. In the latter part of the series (because in the first part I did not go far enough to look for it), I have found infiltration of the retro-duodenal lymphatics, and lodged therein the bacillus lactis pyogenes from which we make pure cultures and by the administration of which we produce convulsive attacks in guinea pigs.

Based upon these clinical facts there is room for a very large amount of theorizing, and you are just as much at liberty as I am to formulate your own theories. But the significant fact is that in a consecutive series of cases now numbering nearly 100, we have for the first time found pathological constants of any character. Then we corrected the mechanical obstruction.

I said that mechanical obstruction was a pathological constant. However, the details of that mechanical obstruction may vary. You may have a markedly ptotic colon; you may find the hepatic flexure down to the level of the crest of the ilium, you will find the cecum in the bottom of the pelvis, you will find the transverse colon rolled and piled upon itself, and occasionally you will find a lowering of the splenic flexure. Sometimes you will find a very redundant colon, and sometimes you will find an exceedingly redundant sigmoid. Any one of these conditions may operate in an obstructive way to retard the fecal current, produce fecal retardation with consequent hyper-absorption of the toxins contained therein. When you have a ptotic colon, especially with descent of the hepatic flexure, you find always by virtue of its normal anatomic connections, constriction of the lower

segment of the duodenum. The peritoneal ligament connecting the hepatic flexure with the posterior wall of the abdomen lies above the lower segment of the duodenum. From this added weight you have a certain impaction of the normal current within the duodenum. Now with this obstruction of the lower end of the duodenum and the peristaltic propulsion from above; you necessarily have a dilatation resulting in hyper-absorption under pressure. And that is why it is that in this class of cases we are finding, I take it at least, a migrated normal impairment of the alimentary canal, not previously presumed to have any pathogenic significance.

Now, then, seeing the mechanics of this condition, you can begin to understand why it is that, assuming that the micro-organism in question shall be proven to have pathological significance, it may find its way into the systemic circulation and thereby become an ischolytic factor in the production of certainly one of the most baffling diseases, barring cancer, with which we have had to contend. We can readily understand furthermore why it is that this state of affairs resulting in the frequent explosions that are characteristic of the epileptic, sooner or later and in a perfectly secondary way induce more or less inconstant lesions of the cerebrum. But, you say, what evidence is there that the system is thus invaded aside from this local condition of which you speak?

In an attempt to answer this question, I will refer to another point that I have not been able to find in the books, but which I have been observing in epileptics. And let me say that I have never yet operated for epilepsy—God forbid! That belongs to the other fellow. I am dealing only with the mechanical conditions as demonstrated, and treating only the surgical conditions that are offered. But while all this is going on, I see some other things. And sometimes these patients, while under observation, have attacks, and I find that the saliva in the midst of this does not give the alkaline reaction to litmus. It is always acid. What produces this acidosis? We find that urine examined immediately following these attacks carries a very large proportion of acetone.

We find another very interesting thing: That as a general rule (to which there are exceptions), an epileptic has a mean average temperature below the normal—97+. Very often it will go down to 95, then come up to 99. When you get this extreme of temperature with extreme oppression you are in imminence of an attack, and after the attack there is but very little vacillation for several days until vacillation begins with perhaps

depression, and then you have another attack. Does that look as if there was something in the way of systemic involvement in these cases?

To sum up direct observations, leaving it to you to make the analogy: You will say, "Well, this is a head condition, here is a sudden suspension of consciousness." Very well, you have a suspension of consciousness following a dose of morphia; you have a suspension of consciousness following the administration of chloral; you have a suspension of consciousness in certain systemic conditions of fairly well established character of that intoxication; you have had a suspension of consciousness in certain of the more definitely recognized infections of the septicemias in the end histories of these cases. In other words, an infection is capable of producing a suspension of consciousness. But, you say, the motor centers are involved. Yes, the motor centers are involved; the motor centers are likewise involved when you give a poisonous dose of strychnia, and you do not call that a disease of the central nervous system. You know what produced that. There is a sudden disturbance of the motor centers in tetanus, and you know that there is an infection involved in tetanus. In other words, the analogies are not so far removed when it comes to an explanation of the phenomena that I have recited. I will repeat: When it comes to that explanation the analogies are not so remote as they would seem at first blush.

I want to leave this question just here: The subject matter is under observation, and I bring it to the attention of this Society simply as a seed thought that I trust will germinate and result in observation. I have arrived at no conclusion, but am endeavoring as far and as rapidly as I can to interpret and assimilate and apply to the relief of humanity the phenomena that have come under my observation.

THE SURGICAL TREATMENT OF OLD GONORRHEAL INFECTION IN WOMEN*

S. A. SPILMAN, M.D., F.A.C.S., Ottumwa

As will be seen from the title of my paper, little will be said of that large number of women who become infected with gonorrhea, but through skillful management or through chance, escape a more serious chronic condition. It is a well recognized fact that the bacillus of Neisser is one of the most persistent and elusive of the infections.

The time was when gonorrhea in the female

was considered as being much more simple and much easier of cure than the same disease in the male, but this is all changed. It has been found that the uterus, ovaries and tubes are all peculiarly liable to become infected, and in such a case no one can predict with any certainty the outcome. An infection of the endometrium is almost sure to be followed by infection of the tubes. Fortunately the fimbriated extremity of the tubes is likely to be sealed up and thus protect the peritoneal cavity. Salpingitis is very likely to be followed by accumulation of pus, and this may be emptied into the uterus at intervals, relieving temporarily the distressing symptoms of chill, fever, pain, etc. The health often becomes undetermined and the subject becomes discouraged and miserable to the last degree. Quoting from Skene "Gonorrhea is essentially an infection which tends to remain chronic rather than to recover." Acute exacerbations are frequent.

Hydrosalpinx may result from gonorrheal infection. The tumor in the case is movable and retort shaped. Pyosalpinx is likely to be adherent to surrounding structures and often forms sausage-shaped masses at the sides of the uterus. The pus may extend downward and form a large mass in Douglass' pouch. The ovary may become involved in this mass and then present a tumor of considerable size.

The diagnosis in these late cases must rest largely on the history and physical findings, as it may be difficult or impossible to demonstrate the gonococcus.

When the case has reached this stage, surgical treatment is clearly indicated. The character of such treatment will be spoken of later.

Infection of the glands of Bartholin may give much annoyance and may be very persistent, recurring again and again after being incised. The best treatment for this condition is entire removal of the sac. So also occasionally Skene's glands may require to be incised and some silver solution or iodine applied.

Abscess of the tubes, if not properly treated, may be followed by more serious complications, such as openings into the bladder or the bowel. In such a case a portion of bowel may become so diseased as to require excision of several inches. Of course this is a very serious condition, greatly increasing the danger of general peritonitis. In any case, complete removal of the affected tubes must be effected. If both ovaries and tubes are involved and adherent to surrounding structures, it is better to do a hysterectomy, care being used to cover over all raw surfaces with peritoneum. Where the cervix is left, which will be done in a majority of cases, it is well to pare out the mu-

*Read before the Sixty-Fourth Annual Session Iowa State Medical Society, Waterloo, May 12, 13, 14, 1915.

cous surface of same or to use the cautery to procure the same effect.

As an illustration of the differences in cases and treatment, I will relate the following: Mrs., aged about twenty-five, called me to advise her in a case which she said had been called appendicitis. She had been suffering from pelvic distress, at times severe, for many weeks. She had some fever and was much reduced in flesh. My diagnosis was pyosalpinx, probably of Neisserian origin. Upon opening the abdomen, I found both tubes involved and the smaller one was easily removed. On attempting to remove the other tube, the abscess was broken and I soon discovered there was an opening into the ileum. It was found necessary to remove eight inches of the ileum. This patient left the hospital in three weeks and has since remained quite well.

The next case, a woman about forty-eight years of age, gave a history of pelvic abscess twelve years previously. At that time drainage was done through Douglass' pouch. This woman made a fairly good recovery, being of strong build and with an excellent constitution; however, she always complained of more or less pelvic pain and a disagreeable purulent discharge from the vagina. She finally became somewhat dependent upon drugs to relieve the pain. On opening the abdomen the ovaries and tubes formed a mass closely adherent to the uterus, which was markedly enlarged. Supravaginal hysterectomy, double salpingectomy and double oophorectomy resulted in rapid cure, both of the pelvic condition, and as a result of her hospital care, relief from the desire for narcotic drugs.

The question of removal of both ovaries in this class of infection has been the subject of much discussion. I have always practiced conservatism where it seemed at all advisable. I believe it has been clearly demonstrated that leaving a portion of an ovary will prevent much of the stormy scenes that all of us have witnessed in certain cases. There are cases in which, due to extensive adhesions, it is impossible to remove every vestige of ovary or at least it is not easily done, and it is likely that the small amount of ovarian tissue left, acts favorably.

As the pus in old cases is usually sterile or at least not virulent, we usually do not drain. The old adage,—“If in doubt drain” still holds good, but the doubts are fewer.

Finally, all old infections of Neisserian origin are to be treated by radical surgical procedures, the precise methods being determined by the surgeon at the time.

MADELUNG'S DISEASE*

E. C. McCLURE, M.D., Bussey

Spontaneous forward dislocation of the wrist joint or Madelung's deformity, so-called by being first correctly described by Madelung in 1878. A few other writers had described a similar condition about ninety years ago. Since that time several articles on the subject have appeared in foreign journals, but probably on account of extreme rare occurrence of the condition, we have found only two articles published in the English language. DeWitt Stetton of New York published a rather lengthy article in the *Journal of Surgery, Gynecology and Obstetrics* for January 1909, and A. C. Stokes of Omaha in the *Annals of Surgery* for August, 1910. At that time, Dr. Stokes presented the history of two cases, case number one, a Nebraska case and number two an Iowa case. This patient was presented as a clinic before The Southwestern Iowa in January, 1910, with the following history:

Miss M. S., age fifteen; parents living and healthy; no brother or sister living or dead; had had measles and mumps as a child with no complication, otherwise personal history negative; weight 132; height five feet and two inches; girth twenty-eight. At about thirteen years of age she noticed that her wrists were slightly deformed and painful on use. This condition is much worse now (1910) than then.

This case was presented by Dr. Mitchell of Osceola. It was the writer's privilege to see this case at that time and to hear the paper read by Dr. Stokes, who stated that in all literature there was a total of fifty-eight cases reported.

After returning home and finding two cases in one family within the next two weeks, we were inclined to believe that this condition was more common than formerly believed and perhaps often not recognized, a wrong deduction evidently, as no new cases have been reported since that time to our knowledge. None were ever presented at Cook county and only four west of New York. These facts are mentioned only to emphasize the fact that the unusual may happen anywhere, any time.

The deformity consists of a forward dislocation of the wrist joint, nearly always bilateral and beginning at about ten years and gradually progressing until about twenty, after which the deformity remains the same. These cases are both girls, and when first seen, five years ago, were aged ten and eighteen respectively, American born of French parents, father a store clerk.

*Read before the Sixty-Fourth Annual Session of the Iowa State Medical Society, Waterloo, May 12, 13, 14, 1915.



There are five other children, all healthy and normal, as are these two in every particular except the wrists, and until the trouble began. No history of trauma.

The photographs of the older girl's hands (H. D.) show the typical result; the younger's show the condition before disease has progressed very far. In both the disease began at about the age of eight, and in the older girl there has been no change since eighteen. One sister and one brother rank in age between the girls.

Pronation, supination and flexion are normal except neither can do much heavy work, the joints being weakened. There is not much pain on using the hands unless some pressure is used. The girls are able to do all ordinary house work, but cannot do any heavy work which would require any severe strain, and if such work is attempted some soreness follows.

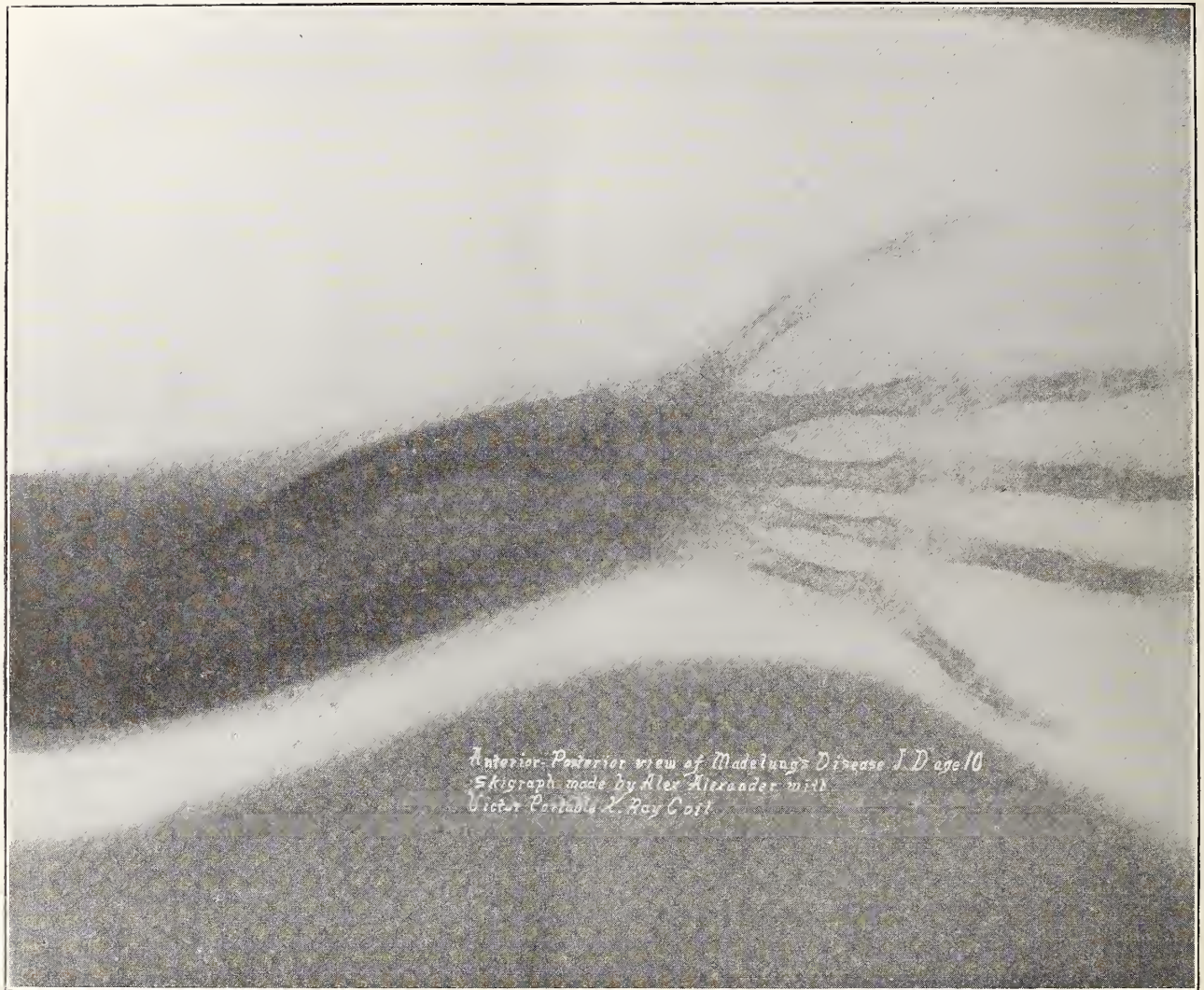
Etiology—Various theories concerning the cause of this condition have been advanced. Madelung's opinion was that the flexors of the forearm, from some unexplained cause, were

stronger than the extensors, and this was the cause of the deformity.

Discussion

J. F. Herrick, Ottumwa—Referring to the skiagraphs shown here, I have in mind reporting a case that strikes me as being somewhat similar, although not exactly like this. A lady about thirty years of age came in with deformity of the wrist appearing just like this. On examination we found what seemed to be an atrophy of the lower portion of the ulna, resulting in a deformity of appearance exactly like this. She said that the condition had existed for a number of years, but did not give any definite history of having it from eight or ten years of age up to the time of attaining full growth, but it gradually developed. The ulna was sufficiently shortened that it allowed a dislocation at the wrist. That was the condition in which I found it, and I was under the impression that there had been a low grade osteitis present which had resulted in the shrinking of the bone.

On another occasion I was called to make a skiagraph of a young man who had been hurt and claimed damages. His wrist was somewhat deformed, but not markedly so. However the skia-

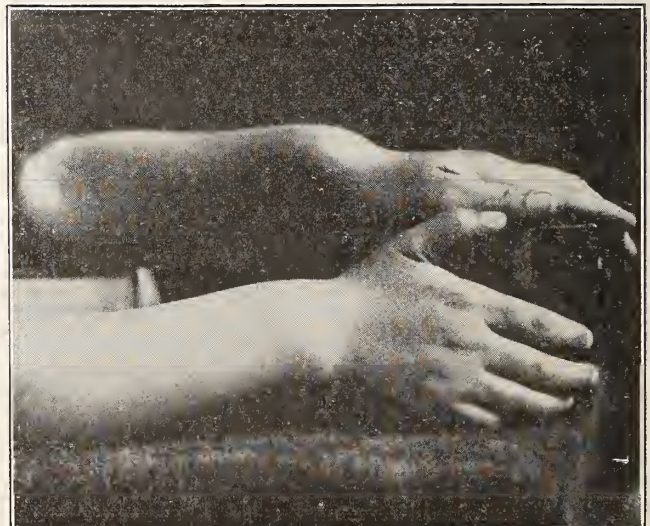


graph, taken about six weeks after the injury, showed such an absorption of the lower end of the radius that it was not entering into the joint formation at all. Now, I believe that eventually that man would have had a dislocation of the wrist and a

condition similar to that presented here. Whether that is the nature of these cases, an early injury producing some bone deformity or disease that would result in dislocation, I do not know. But I do know that in these two cases we had in one a marked de-



H. D., Age 18



Showing Deformity After Two Years, J. D., Age 10



Anterior Posterior View of Madelung's Disease. H. D., Age 18

formity such as is shown in these pictures, and in the other a complete absorption of the lower end of the ulna to such an extent that it allowed dislocation of the wrist. In the other case dislocation had not yet taken place, but there was absorption of the lower end of the ulna.

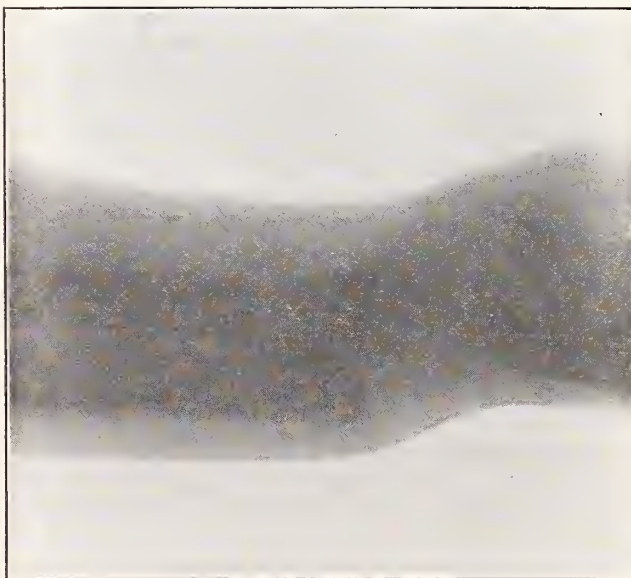
W. L. Bierring, Des Moines—I believe the members here would all be interested in knowing the history of events which perhaps led up to the reporting of these cases.

Dr. McClure attended a meeting of the Southwestern Iowa Medical Society several years ago, at which Dr. Stokes of Omaha presented a report of a case of Madelung's disease. Dr. McClure went home, and, to illustrate the value of attending county and district medical meetings, within a year he found these two cases.

I showed the skiagraphs used here today to a surgical colleague of wide experience saying, "These are two cases of Madelung's disease," and he replied, "What in the world is Madelung's disease?" This indicates that the condition is not very frequently observed, and for this reason I feel the Society is to be congratulated that one of its members, by

careful research and detailed report, has made a distinct contribution to Iowa medicine.

H. C. Eschbach, Albia—I remember distinctly the



Lateral View, J. D., Age 10

meeting at which Dr. Stokes made this report, and as I happened to be getting up the program of that meeting, his report was sent to me. When it came in it was not typewritten, and I had a great deal of difficulty in making out the name of his title. I carefully searched through the medical dictionary, but in vain, then asked half a dozen doctors what Madelung's disease was and no one knew. We had a very interesting report from Dr. Stokes, and, if I am not mistaken, it was within a month or so after this meeting that Dr. McClure found these two cases in a family in his neighborhood.

Dr. McClure—I have very little to add. I am grateful for the interest shown in this report. When I saw the first case I thought I would look it over carefully because I might never see another.

These cases are mavericks. If surgeons do not claim them and the internal medicine men don't want them, I do not know where they belong.

REPORT OF A CASE OF INTRA-OCULAR SARCOMA WITH SOME COMMENTS ON DIFFERENTIAL DIAGNOSIS*

W. J. BUSSEY, M.D., F.A.C.S.

AND

J. W. SHUMAN, M.D., Sioux City

Our object in reporting this case is to elicit discussion on the differential diagnosis of intra-ocular tumors in children, particularly that between glioma and sarcoma, and to draw attention to the apparent confusion which exists in text books and literature in the classification of these growths.

As a result of this confusion it would seem that the question of diagnosis in advanced cases presents some difficulties, and this was another element in this case which seemed to make it worthy of being reported. A stained section from the eye, and one from the intra-cerebral growth found at autopsy, were submitted to five pathologists, some of them of national reputation. Two made a diagnosis of glioma, while three declared it to be a round cell sarcoma.

While it may be true that the discussion of the differential diagnosis of these two conditions is mostly of academic interest, as the treatment of either would be the same, still the question of prognosis in some instances might be of importance, and it would seem that a more satisfactory classification of these pathological conditions might be made.

In practically all of the books on diseases of the eye, intra-ocular glioma and sarcoma are classed as separate pathological entities, and most of us regard them as such. For instance, we ex-

pect glioma to occur in infancy or early childhood, and seldom in adults; while intra-ocular sarcoma is considered a very rare disease in children. Glioma has been given the optic nerve and retina for its points of origin, while sarcoma arises from some part of the uveal tract. It is stated that glioma frequently extends to the extra-ocular tissues and to the brain by way of the optic nerve, and that metastases to distant parts of the body seldom occurs, while in sarcoma metastases is very frequent, particularly in the liver; that in appearance under the microscope glioma appears to be made up of cells which are often "fibrillated," and contain no pigment, and that these cells are arranged in "rosettes" around the blood channels, while sarcoma cells are often pigmented, and seldom show any definite method in distribution and arrangement. In works on pathology, however, these clear-cut and well-defined distinctions are seldom found, and it would seem that there exists some confusion as to whether a glioma is merely a sarcoma of the retina or optic nerve, whether a pure glioma is malignant or not, or whether it ever exists except in combination with sarcoma, the so-called gliosarcoma.

For instance, Delafield and Prudden in the 1914 edition of their work on pathology, state: "Pure gliomata are benign tumors, though in their most common combination with sarcomata they may be very malignant. Some of the so-called gliomata of the retina are apparently small spheroidal cell sarcomata."

Bland-Sutton in his "Tumors, Malignant and Benign" calls glioma "sarcoma of the retina" and "sarcoma of the optic nerve." Parsons in his "Pathology of the Eye" admits that our knowledge of these growths at this time is not sufficient to enable us to make a very definite classification. Choyce states that "sarcoma of the eye occurs in two chief forms,—glioma of the retina and sarcoma of the uveal tract."

Leslie Buchanan in his work on "Intra-Ocular Tumors" states that "the distinction between leuco-sarcoma of the choroid of children and adults is: that in the former it is a round cell growth and highly malignant, while in the adult it is spindle celled or fibro cellular." He has come to the conclusion "that with intra-ocular tumors of children it is rarely safe to attempt to foretell from the clinical appearance exactly what will be found by the pathologist.

H. Knapp in his "Treatise on Intra-Ocular Tumors" says "that the easiest mistake to make in attempting a differential diagnosis is to take unpigmented sarcoma of the choroid for glioma of the retina," and that "regarding the distinc-

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tion between glioma and leuco-sarcoma from a pathological point of view there is still room for considerable investigation." He quotes Lagrange as being probably the first to dispute the retinal origin of some of the intra-ocular tumors of childhood, and goes on to say that after an experience of about twelve years, in which he had opportunities to study a rather large number of

left eye, moderate edema and congestion of the bulbar conjunctiva. The movements of the globe were restricted, especially inward and downward. The globe was very hard and the cornea was dull and cloudy. The anterior chamber was practically obliterated, and the iris tissue appeared discolored, and studded with numerous reddish areas.

The diagnosis of malignant neoplasm was made, and enucleation was advised and performed the following day. At operation the bulbar conjunctiva was found much thickened and congested, and very friable, but at no point did it seem adherent to the globe. Inspection of the globe during and after removal, revealed nothing that would indicate extension of the growth outside of the sclera, and a careful examination of the orbital tissues by inspection and palpation, revealed nothing abnormal. The eye was immediately turned over to a pathologist, who reported a small round cell melano-sarcoma, originating probably from the choroid.

Healing took place rapidly and the orbital tissues presented the usual clean appearance which follows the ordinary enucleation. The patient rapidly regained apparently normal health, which condition continued until September 6th, when the child became listless and complained of severe headache and pain about the right eye. She was referred to Dr. Shuman who found as follows: The child evidenced negative findings, the left orbital cavity was clear, the right pupillary reflex was normal. The temperature, pulse, and respiration were normal and remained so during the final twenty-four hours of life. The child was extremely restless. The following day at nine-thirty A. M. the child was quite restless and there was marked photophobia (right eye). Two hours later two slight clonic convulsions, with a five minutes interval, occurred, and were controlled by

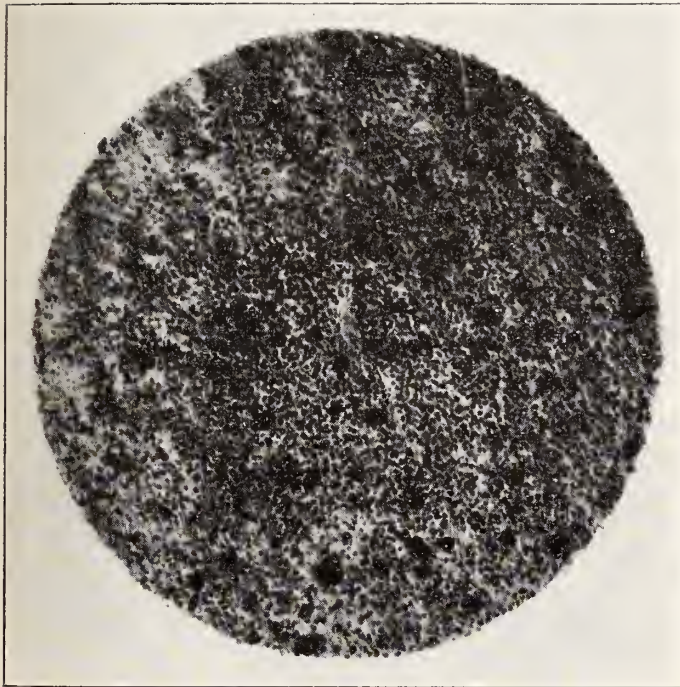


FIG. 1. Cross section of the eye showing, (A) the cornea pushed forward by the intraocular tumor, and (B) the pigmented tumor springing from the choroid.

cases, he concluded "that undoubtedly many cases which appeared to be glioma were really sarcomata taking origin in the choroid. It is undisputed that even in such cases the retina may be involved secondarily, and many cases have been seen.

In a personal communication from Komoto of Tokio, he states that sarcoma of the choroid in early childhood is a great rarity, but that this rarity may be more apparent than real, from the fact that it is frequently diagnosed as glioma.

Case History—Female child, age three years, first seen August 3, 1914, when the following history was obtained: Parents noticed that left eye was slightly inflamed some ten months before, and this inflammation recurred at intervals. There had been some photophobia at first. The condition of the eye gradually grew worse in spite of intermittent treatment, the nature of which was not ascertained. The parents stated, however, that operation had not been suggested. One week previous to examination the child began to suffer severe pain in or about the eye, and probably as the result of loss of appetite and sleep, had lost considerable weight.

Examination revealed slight exophthalmos of the

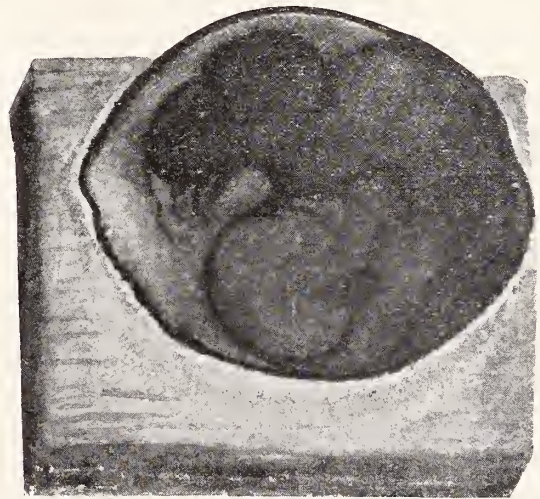


FIG. 2. Photomicrograph of a section of the eye showing the typical sarcomatous round cell formation of Mesenchymatic origin. More or less pigment scattered throughout. Ocular 2. Objective 4. Leitz.

hot packs. Death took place without any other symptoms at twelve thirty P. M. Clinically, the cause of death was thought to be intra-cerebral pres-

sure, due to some tumor. No idea of its location was entertained.

Autopsy—The autopsy was performed at eight-thirty P. M. of the same date, and gave the following findings: A well nourished, white, female child, apparent age three years; the left eye was absent. The left orbital cavity was clean and there were no changes in the orbital tissues. The right pupil was fully dilated. Rigor mortis was slight. Permission was received to remove the skull cap only. The same was opened in the usual manner and nothing abnormal was noted until the optic chiasm was exposed and severed. A tumor within the interpeduncular space was found involving the chiasm, dark red in color, and markedly infiltrated with blood and necrotic material. The tumor was two and one-half centimeters in length and the same in breadth, its depth was about two centimeters. Transverse sectioning gave the same findings. The right and left optic nerves were apparently of the same size, shape and consistency. The right eye appeared normal. Smears were made from the broken down material, stained and examined, and were negative for any micro-organisms.

Pathological Examination—The bulbus (Fig. 1) has been cross sectioned and one week in alcohol after fixation in formaldehyde solution. The specimen is firm and even in outline, although the cornea is pushed forward by the tumor mass which is irregular in front, but the posterior surface is even and covered by the sclera. The tumor is dark brown in color.

Microscopic Examination—The tumor mass is made up mainly of small round cells (Fig. 2) which take intense staining; oblong and spindle cells are visible, although few in comparison. The cells lie in parallel lines mostly, but can also be found in groups and sections. Quite a bit of pigment is present throughout the section. Sections of the tumor of the optic chiasm is no different from the above with the exception of the absence of pigmentation.

Diagnosis—Small round celled sarcoma of the choroid with metastases to the optic chiasm.

In view of the extreme rarity of intra-ocular sarcoma in children, sections of the specimens were submitted to another pathologist in Sioux City, who also reported a melano-sarcoma. They were then sent to two other men, one of them an ophthalmologist of international reputation, and the other a pathologist likewise of international repute. The former reported that he had not only examined the specimens himself, but had a pathologist look at them, and they both pronounced the growths glioma. The latter reported that the tumors were unquestionably round celled sarcoma.

THE EFFECTS OF THE WORKMEN'S COMPENSATION LAW ON THE PROFESSION*

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That the practice of medicine is now passing through an evolutionary period, there can be little doubt. Perhaps the most striking evidence of the changes are seen in the compensation acts passed by the different state legislatures. It is becoming more and more apparent that the practice of medicine is in a certain sense, a public function, and on this assumption the public will not hesitate to require a certain amount of service on the part of the doctor without compensation. It is seen that the state is taking charge of medical education and exercising a close supervision over the conditions of medical instruction and fixing the qualifications of practitioners of medicine. The state determines the question of who shall practice medicine by an examination and the issuing of a certificate. In return for this for some time past the state has required the doctor to fill out certain certificates including births and deaths, generally without compensation. The state has required the medical practitioner to perform certain health functions for a very small money consideration, and now the state is passing certain workmen's compensation acts which requires the doctor to render services for less than the usual fee bill provides. How far this course of procedure will extend, no one at the present time can say.

For some years past there has been a growing feeling that a higher regard should be paid to the protection of human life and limb in the industries. When industrial work was conducted by slow moving machines or machines with low power for destruction, there was no apparent necessity for the workman to become injured unless it was through his own negligence, but in course of time when the movement and power of machinery became vastly multiplied, then it was that the human machine was unable, except in a comparatively small number of cases, to conduct his mental operations with sufficient rapidity to make it safe for him to control such machinery except under the most favorable circumstances. When this time arrived the feeling began to grow more and more in the direction of holding the industry responsible for any accident that might overtake an employe, and so shifting the burden of accidents from the employe to the employer.

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and to the general public. There was another motive in bringing about this change in conditions. It was assumed if the burden of the accidents be placed upon the employer, more care would be exercised in guarding machinery in such a way that the employe would be less liable to injury.

In this same connection it began to be appreciated that certain diseases occurred more frequently among people working in industries of certain kinds than outside, and therefore it was reasonable to assume that a class of diseases actually existed that were due to or influenced by the employment, and might be designated as "occupational diseases." This very reasonable assumption supported by well established facts, then lead to expert investigation of the exact bearing of these facts and assumptions. It was well known that workers in lead and mercury and arsenic, for example, were subject to certain kinds of disease which were designated as lead, mercury, and arsenic poisoning, but there were some other diseases in which the facts did not appear to be so well established, and yet might properly come under the designation of "occupational diseases"—on account of unsanitary environment—or diseases incident to certain occupations. The exact bearing of all these diseases which the industries might be especially interested in, must of course be referred to experts for careful study and classification, and if the report should tend to show that there are well defined affections incidental to certain kinds of employment, then the workmen should be entitled to the same consideration as industrial accidents, and the burden placed upon the industries that are responsible for these special forms of disease. This then brings us squarely to face the question of industrial accidents and industrial diseases which have been and are now being studied with special reference to improving conditions that society is particularly interested in. This consideration of accidents and diseases has engaged the attention of foreign governments for many years, and most of the important facts have been carefully worked out, but the peculiar genius of our people so far as governmental control is concerned, seems to rest upon the doctrine of "laissez-faire," that everybody should be left to take care of himself without governmental supervision so far as private affairs are concerned. But the great number of accidents in American industries and the number of preventable diseases incident thereto, became so alarming that it seemed that state interference was absolutely necessary. When we began to consider these matters we were astonished to find that the conditions of the workmen and

women in many parts of Europe were very much better than ours. We had been led to believe by a certain class of politicians that the reverse was true, but now we know better. The awakening that has come to us from a better knowledge of industrial things as they exist abroad, has brought to our minds the importance of state interference in industrial conditions that was never thought of before, and which to some degree we have come to resent, but we are at last coming to realize that state control is to be regarded as a permanent factor in our industrial life, and it is useless for us to believe that we can ever return to that state of affairs which allows the employer and employe to conduct their relations in a purely personal manner. Having now reached these general propositions it will fall to the public to work out as far as may be, some plan that will be for the best interests of all parties concerned.

There can be no doubt in the mind of the close observer that the experience of such advanced governments as Germany, England and France, might well be taken as the best standards for us to follow, yet it will probably be necessary to modify the German and English methods in order to meet our different idea of governmental relations and at the same time to reach a degree of efficiency that will not put us too far behind our foreign competitors. It may be said in this connection that even in England and Germany, perhaps the two most advanced countries in industrial methods, that the working of industrial compensations has not been entirely satisfactory. This is quite natural in view of a somewhat widely divergent interest.

To my mind three factors must be taken into account in adjusting the industrial relations in our own country; first, the industrial worker himself; second, the employer of labor, and the public, and third, the medical profession, each endeavoring to escape an undue share of the burden. We need scarcely refer to the industrial worker except to mention that any compensation law should be primarily for his benefit in that it should secure him fair compensation for the risk he has taken and the injuries he has sustained in consequence. All are familiar with the methods used in the past, how it was that the injured employe endeavored to secure by any means the best settlement possible, and that the employer likewise sought by every means to secure a satisfactory adjustment. The consequence was that a large share of the contribution went to a third party; that the employe frequently got less than he ought, and there was a degree of wastefulness that should be eliminated. The state itself has a wide range of interest in adjusting all these

questions on an economic basis and yet secure results that may be helpful to the worker with the least burden to the public. The interest of the state lies in securing for the workmen the shortest period of disability and the most complete recovery possible. This may be accepted as the fundamental provision involved in workmen's compensation acts.

Under the head of economic administration of benefits to the workman, comes the character of the compensation acts, which should receive the fullest consideration by men of broad views who can escape the influence of private interests which seek to gain profit by any legislation however altruistic it may be. It is generally believed that the workmen's compensation acts will remove much of the court expenses that come now from litigation in claim cases against corporations. If it is true that there will be a material reduction in court costs and a consequent saving, the state therefore gains in just so far as the reduction of court expenses go, and if the state is saved from loss in the direction of court expenses, then it becomes the duty of the state to make certain contributions for the maintenance of measures affecting the general public. While the theory is that the industry and the public must be prepared for an increase in the cost of production in order to meet the burden of providing compensation, it would manifestly be quite unfair to place the burden indiscriminately upon the industry which would perhaps compel certain industrial readjustments. Therefore any compensation to be fair in its provisions should contemplate the administration of benefits in such a way that they may be fairly adjusted between the several interests. Industrial accidents and occupational diseases must of necessity bear certain relations to the medical profession, not only to the medical profession but incidentally to provisions for the scientific care and treatment of cases in hospitals. This would mean that provision should be made for reasonable compensation for medical services and for the equipment of hospitals that can care for the injured and sick workman in such a way that the fundamental principles of these acts may be carried out. These principles involve, as already stated, the most complete restoration to health, in the shortest period of time with the smallest permanent disability. The farming out of the care of injured and sick workmen, and their treatment at hospitals that should be looked upon as specialized boarding houses, or at best as nursing homes, will not meet these fundamental ideas in any adequate manner, and the results of any compensation law that contemplates this method of caring for the injured and sick, must

in a great measure fail of its purpose. The most reasonable and logical method of providing medical services has been furnished by the German government of fixing a certain tax upon the workman and a certain tax upon the industry, the government assuming the remainder of the burden. The medical man appointed to the care of the industrial classes should be one well trained in modern methods of diagnosis and treatment, and who has the conscientious idea of what his duties really are. A hospital that conserves any useful purpose in the care of this class of patients, should be provided with modern methods of investigation and modern methods of treatment; that is, the hospital should be under skillful management with highly trained nurses and with instruments of precision which include essentially a well equipped laboratory and a complete X-ray outfit.

The experience in Germany and England particularly shows that there is a very decided tendency to malingering on the part of industrial workmen, which Dr. Byrom Bramwell of England has well said threatens to undermine English character. This tendency to malingering requires most careful consideration and requires the skill of a trained diagnostician to detect. No one would contemplate for a moment that it is fair to the industry or to the state to provide relief for an unlimited time to malingerers. In order to provide for such contingencies, careful and complete records are necessary. Carefully recorded observations should be made and the histories of cases should be complete and accessible. These records and histories should constitute valuable data for the purpose of determining certain questions that must constantly be considered in dealing with individuals who are provided for by the state and the industry.

Under the provisions above stated it becomes possible by careful inquiry into the condition of workmen by repeated examinations—not when they are sick alone,—but in anticipation of sickness or accident, with the view of conserving health and physical vigor. We are all familiar with the fact that machinery, locomotives, etc., must be inspected from time to time for the purpose of detecting any impairment in their working operations, but we have given little thought thus far to the inspection of the bodies of the men who are to operate this machinery. It is well known that a comparatively small defect in the machinery of a locomotive or an automobile may lead to a breakdown at a most inconvenient and inopportune moment. We also know that there are certain insidious diseases like Bright's disease, diabetes, and nervous derangements,

which may develop at a like inopportune moment to the serious detriment to the individual, and it may be to the public. If it be desirable from time to time to inspect the engine, it is likewise desirable to inspect the engineer. This is done very generally at the present time so far as eyesight and hearing are concerned, but very little has been done with the view of extending this inspection to other parts and organs of the body. We are therefore agreed that the most skillful medical and surgical treatment will lessen the disability and lessen the chances of permanent crippling from accidents. These wholesome results cannot be obtained except by the expenditure of money, from some source, and the question for the legislator to consider is from what source this money should most economically come.

It appears now that the most influential obstructive influences will come from certain private insurance organizations. From the evidence before us it is apparent that the ideal benefits to come from compensation is to render the most complete service for the smallest compensation, and this can only be done by the state. If insurance is furnished by private companies, the cost of administration will amount to something more than one-half of the money paid. If the state administers the insurance it can be administered by salaried officers of the state without profit, and if it should involve a loss to the state, the state is certainly one of the parties that should bear part of the burden, because as we have said, the whole plan is to benefit first the workman and second the state, and this cannot be accomplished by exacting profits at every step.

It is not the purpose of this paper to consider a definite plan of state insurance, only to express a belief that state insurance is the proper plan, and that it will come to be the plan adopted by all the states sooner or later. There are twenty-four states that have taken up the question of workmen's compensation, and there are almost twenty-four different plans of doing this work, and no plan, in our judgment, will succeed that is not based in a general way on the plan that has been worked out in foreign countries. Of course we shall hear from time to time of interested parties saying that we cannot adopt the plans of organization adopted by foreign countries, but we fail to understand how medicine and surgery in war or economics can be materially different in the United States from other countries. Another point weakly advocated by private concerns is that the government cannot administer business institutions in a safe or economic way because of the influence of politics, but we may say in reply that politics are just as we make them. We are

the people of the United States or of the State of Iowa, and we vote for public officials, and if we are not honest in our vote we cannot be honest in our private dealings, so I think we may dismiss the objections of state administration of a public service as purile and unworthy of serious consideration.

In close connection with the insurance feature of industrial accidents and sickness, comes the interest of the medical man. It has been asserted by a representative of a private mutual insurance concern "that the laws passed seem to be more for the benefit of the medical fraternity than of any other class. It does not seem wise to have the same criticism applied to the Iowa law." The absurdity of this statement becomes apparent when the fee bills proposed by the different private insurance companies are examined, because in nearly all the states, the fee bill is less than one-half of the ordinary local fee bill charge, and in some states, particularly in Washington, there is scarcely any compensation provided for the doctor. As a business proposition it may be assumed that the insurance companies will endeavor to realize as much out of their business as possible, and in order to accomplish this purpose will endeavor to establish a contract relation with members of the medical profession for the smallest sum possible. It is the hope and expectation of these private companies to secure enough medical men by contract so as to assure the company a profit on the doctor's work. It is difficult to see how the medical profession can approve such a method of rendering medical services. I here quote a statement made by an official of a Mutual Casualty Association.

"We have found in our experience that there is but little feeling among the medical fraternity on so-called contract practice. The members generally realize that their business is becoming commercialized and they must take advantage of the modern conditions or will be overwhelmed."

In another paragraph the same insurance official makes the following statement:

"We have found from actual experience that our present system is entirely satisfactory to the Association, the medical staff, the employers and the employes. It is only when one of our cases gets in to the hands of a doctor other than a member of our staff that we have any trouble."

It is to be profoundly regretted if the quotations made here represent the spirit of the medical profession. It is sometimes contended that certain members of the medical profession are so dishonest that they will take advantage of an opportunity to charge unreasonable rates for comparatively small service, and that the only way the insurance company can protect itself is by

entering into a contract which will protect the company against such abuses. This allegation is thrust in our face whenever we attempt to discuss the question of medical service with representatives of a certain class of insurance companies.

We are not yet prepared to believe that there are any considerable number of medical men who are competent to render high grade emergency service that can entertain views such as stated. The contracts with insurance companies for services of this kind, involve the doctor in a greater increase of liability for malpractice suits. The Medical Legal Committee of the State of California has refused to defend contract doctors against malpractice suits until the case is carefully inquired into by a committee for the purpose of determining the conditions that exist in the particular case, assuming that the risk to the State Society of protecting contract doctors is much greater than the risk of protecting doctors not engaged in this line of work. There are probably two reasons for this. In the first place the compensation acts in themselves increase the tendency to malpractice suits, and in the second place, the doctors who have been willing to enter into contract arrangements have not been the highest class of men. We believe it is safe to say that the purpose of workmen's compensation laws of securing benefits to the workman will be largely negated by farming out the insurance to private casualty companies for profit, and the placing of the injured and sick employes in the hands of contract doctors. We believe that the provisions of the law should be such that only thoroughly trained medical men be employed in this service, and that only highly equipped hospitals will be regarded as proper places for the treatment of severely injured workmen. We believe that the question of compensation for the medical care of the workman should be fixed by the state with a sufficient degree of liberality to secure results to the injured and sick workmen that the law contemplates. We believe that the medical profession of the state should interest itself in framing compensation laws which would divide the burden in such a way that they may be distributed fairly between the employer, the employe, the medical attendant, and the state. We also firmly believe that liability and compensation laws are also in the right direction, and that they will be adopted by the states and by the national government. We believe in this because we think it is right. We believe that the medical profession is willing to bear its share of the burden in making these compensation acts successful, but it must be provided that the arrangement be affected in such a dignified manner as to place the medical profession above reproach.

Our own observations tend to show that the greater number of industries conducted in Iowa, are conducted in a liberal spirit, and that at the present time it will be more satisfactory for the surgeon to make his own private arrangements with the business itself, free from any entanglement with insurance companies. There can be no objection to a doctor accepting a service for a corporation at less than the regular scheduled fee, if the necessities of the case seem to require it, but in most instances it will be to the mutual interest of the corporation and the physician to arrange for the ordinary scheduled fee rates, because it may be assumed that a fair compensation paid to the doctor by the industry, will be more economical in the end in that it will bring to the injured or sick person the best skill, and in the most prompt manner. Everyone who is familiar with this kind of service, realizes the fact that there are many people who will demand an excessive amount of service if they can receive it without paying for it themselves, but generally this matter can be adjusted between the employer, the employe, and the doctor, in a manner that will be satisfactory to all parties concerned. The employer of labor will soon find that if he lets out the care of his injured employes to the lowest bidder, that the services will not be of the highest grade, and that the period of disability will be prolonged and the amount of compensation which the employer will be called upon to furnish the employe, will be increased much beyond the increased cost of securing high grade conscientious and responsible practitioners. There is no doubt a certain class of men in charge of industries who care little or nothing about the interest of the employe himself, but this spirit will result in such disadvantages to the industry that a change will be brought about sooner or later.

Referring to contract practice, we feel safe in saying that the poor practice in the state has been a reproach to intelligence and honesty of the community, and goes along with the scandals which have characterized the history of county administration of poor laws in our state. Contract lodge practice has from time to time enjoyed a certain degree of popularity among certain classes, but it has never been satisfactory, and the doctor who has been led into this kind of service must feel a sense of humiliation in knowing that he is looked upon with suspicion even by those who employ his services. Our own observation has been that contract lodge practice in any community has been of but short duration on account of the fact that so many lodge members are quite unwilling to accept the services of men who are willing to take this class of practice. It sometimes happens that young men to obtain a start, bid for lodge

contract practice, but they have come to realize sooner or later a sense of humiliation, and have discovered that their services were not desired after a comparatively short time by the better class of lodge members, and that the reputation of having engaged in this service has been a handicap that has required perhaps years to overcome.

Discussion

N. Schilling, New Hampton—I wish to commend the paper, for it calls attention to a very important phase of our work, and I wish to approve and commend the stand that the essayist has taken, especially in regard to compensation. Many individuals look at the medical profession purely from the standpoint of the tradesman, and are apt to become jealous of the fees sometimes paid a surgeon. I notice that when decisions in the court are rendered, the doctor is held to a strict accountability for his work. Cheapening the doctor's compensation is no advantage to any community. This is a point that I believe we must insist on. If the doctor is to deliver to the bedside of his patient the scientific knowledge and experience that are required in some of these cases, he must be enabled to do post-graduate work, he must be enabled to visit the large clinical centers and there gather up information to bring home; and the doctor who charges small fees, who, in other words, aims to satisfy this craving for cheap work, this demand for low fees, unless he is independently rich, cannot deliver the goods from the scientific standpoint.

So I wish to emphasize the point Dr. Fairchild has called attention to, namely: That above everything else the doctor should maintain his self-respect, and when one of these contracts is presented to him and it involves the degradation of his profession, he should refuse to sign it.

S. E. Hinshaw, Newton—It seems to me that this is one of the most important papers to which we have had the privilege of listening. And not only that, but we here have a chance to put into practice the theory advanced by one of our leaders yesterday, **co-operation**. When the contract man comes along and wants you to sign up a bill for fees which are about half the customary fees charged, or even less, we should refuse to sign up or have anything to do with it, because if we stay out of it they will be compelled to pay us our regular fees.

In Newton are located quite a number of factories, and we run into these things quite often. I am sorry to say that we have one man who has signed up, but we are going to do a little "co-operating" and try to get him to quit that kind of business. We must stick together and not cheapen our work, otherwise we will all go down together.

C. F. Wahrer, Fort Madison—The doctors are always being regulated. A lot of laws were recently passed, in which the doctor's practice, as to what they may or may not do, is regulated. They get his fees down to almost nothing, and then limit him in what he may do. We never yet have heard of law-

yers getting together and passing laws to curtail their fees one cent. A doctor could not begin to get the fees for most valuable services possible in the way of conservation of human efficiency or life, in one month that the lawyer can get in one day. When the case of a pauper comes up the court appoints an attorney for him, and, according to the law, an attorney can charge \$20 a day for defending a loafer who has committed a crime. If while the policemen are running after him he stumbles and breaks an arm, the services of a lawyer are required for his defence, and those of a doctor to reduce the fracture, and under these circumstances the lawyer gets \$20 a day or any fraction thereof, while the doctor cannot recover one cent, according to the laws of the state of Iowa, for setting a tramp's arm. We do not appreciate our services enough to refuse signing any such contracts mentioned by the essayist and if we refuse, the fellow across the street will take the contract, and these people know it. And yet Dr. Fairchild has touched upon the greatest thing we have, namely: The compensation of the workman, his efficiency, and the saving in human life. And why should not the man who stands behind all this, the doctor, be compensated as he ought to be, fully as much or, more so, than the lawyer, and why should he have the disrespect and even the contempt of these companies? Just because these companies know that they can find a taker. If the men they were dealing with were butchers, grocers, brick layers, carpenters, farmers, char-women, scavengers or motormen, they wouldn't attempt the cheap and contemptible measures so well described by Dr. Fairchild—but they know they can always depend on some doctor to do their bidding no matter how menial their demands upon him may be.

In the attendance upon our medical societies we sacrifice time and money principally for the good of our patients, and the good of humanity in general, but when it comes to do anything for our own good and personal welfare and that of our dependents, we are as babes in arms when compared with the various labor unions, and not even to be mentioned with the various companies that exploit our services and talents, that are often the means to keep them out of high-priced litigations, and damage suits.

What are we going to do about it?

Dr. Fairchild—About a year ago, when the Iowa compensation law went into effect and when the insurance companies began to send out their fee-bills to be signed up, I received a flood of letters from various sources complaining because something had not been done by the older and leading members of the profession to prevent this, and so I have put these several things together and brought them to this meeting, wondering whether the profession was sufficiently interested in this matter to take any part in it at all.

When the governor appointed a commission to consider the question of a compensation act, all the various interests were advised to come before that commission to give their opinion, except the doctor. Not a doctor was called. A member said to me that

this matter had not been called to his attention, he admitted he was quite willing to agree that a medical service was essential in the treatment and management of injured employes, but that it had never occurred to the commission that they should have a hearing of the doctors. And why? I think that question is answered in the interest manifested in the paper presented here. It is a fact the legislature is going to pass these laws and is going to place a heavy burden upon the doctor, and the doctor apparently is not going to insist upon having any representation.

This question was discussed last year and certain things were proposed, but I never heard of a doctor being asked any questions. And yet in the management of industrial accidents and occupational diseases they cannot get along without a doctor. Now it appears that we will be expected to render service at their terms, not ours, if we want to do industrial practice. A great number of the profession will have to render service to the industrial classes. There are a few perhaps fortunate enough to have a rich clientele, who practice entirely among the wealthy, and these will not come under the operation of this law so far as such practice is concerned. But I am sure that many, and even a very large proportion of the profession, are not in that class, and they will be obliged to look after and treat injured employes of corporations. It is, then, really a question which we ought to consider from our standpoint.

As Dr. Wahrer has said, the attorneys wouldn't forget to be represented, they will surely be on hand, the industries will be on hand, the labor unions will be on hand, but the poor doctor, I am afraid, will need a guardian, somebody to look after his interests, or he will have to carry too large a part of the burden in the scheme of industrial compensation. This has been so in England, it has been so in Germany, it has been so all over the world. Think of a doctor in England treating a dislocation of the hip-joint for \$5, a compound fracture for \$5, all of the dislocations except that of the hip, for \$2.50, all of the fractures except compound, for \$2.50, his visits are paid for at the rate of 2 s. 6 d., vaccine for 6 d., obstetrical cases \$5, and so on. That is liberal compensation as viewed in Europe. We probably will not get to that point here, but it does seem to me that the doctors scattered all over the state should look after their interests by inquiring into what is going to happen.

There is no doubt in the world but these compensation acts are going to be passed and they are going to be made more and more exacting, and the doctor will be a sufferer to a greater degree unless he maintains his own dignity and interests by taking a hand in the framing.

And then again, the law has this additional operation: The man who has received an injury and has been settled with by the commission, is barred from court or legal redress; it is settled by the commission and that ends it, he has no claim against the employer, no claim against anyone. Bye and bye, however, he thinks he did not get as much money

out of this adjustment as he should; by a little inquiry he will find that the doctor is not protected in any way by this law, and so he will institute a suit for malpractice against him because he did not restore that arm or leg or whatever it was, to its former normal condition.

That is the situation confronting us and it means a revolution in the medical practice of those who are doing industrial work.

INFECTION A CAUSE OF LOCAL AND GENERAL DISEASE*

CHARLES H. MAYO, M.D., Rochester, Minnesota

For the past ages of which there is any record, medicine has always been surrounded by more or less mystery, in some periods and among many people being closely associated with whatever religion or form of worship then held by them. Unfortunately much superstition is still connected with the science in the minds of many. When one reviews the past of medicine, what little has been preserved of the writings of the earliest medical men whose names are honored, shows a remarkable insight into the practical side of life. The delicate surgical instruments recently excavated at Pompeii indicate that two thousand years ago men were capable of inventing and using them. Skulls from four to six thousand years old show round and square trephine openings and this is true of the skulls of certain mummies two thousand years old found in Peru and Southern Central America. These openings could have been made with the obsidian glass saw as has been surmised but the instrument may have been less crude, as there are some of the arts that are lost to us, for instance the hardening of copper.

After all it is only the major events which mark milestones of time and the multiplying and complex records of occurrences within our own period and shortly preceding it seem so complete in comparison that it makes us assume great superiority for the present period. From observation and autopsy the practice of medicine has developed, but as people often die of complicating or intercurrent disease it was then too late to complete the records and deductions were not always correct. Medical men of the past were, of necessity, keener observers of their patients' symptoms than the physicians of the present since everything depended on such observations. Slight symptoms, seemingly almost unimportant as thought of today, were to them like straws showing the direction of the wind.

The medical profession has seen during the

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last thirty years so many bewildering changes in its principles and practice that it is difficult to say whether one feels sorry that the science is still so unsettled after all these centuries, or to be proud of the fact that it is possible to reconstruct and change according to the truth in it. The fact is very evident that the theory of disease and its treatment has been almost revolutionized within this period.

When surgery of the heart, chest and abdomen became possible and sight and touch could aid our investigation in the living the science of medicine advanced by leaps and bounds and this has come within a generation. During the last one hundred years more than twenty years have been added to the average length of human life, twelve of these years have been added during the last three decades. The Public Health Service has had much to do with this advancement through its campaign of education in hygiene and the so-called "preventive medicine." As a result there has been a great reduction of mortality in children and consequently more people coming to middle age which is a very important factor in the reported increase in the occurrence of cancer. There is also an enormous number of people saved by surgery as compared with one hundred years ago. How did this all come about? It was through the discovery of a new world the individual members of which, vegetable and animal in type, were only to be viewed by high power microscopes; the aggregate product of their work, however, for good and for destruction was readily visible to the human eye and in disease discoverable by the symptoms produced. Such organisms are as necessary in the economy of nature and in the development of the world's work as are poor mortals who, after all, are but made of countless numbers of cells having special function constituting the organism. It was as recent as 1837, after two years of controversy among scientists, that alcohol was considered a development of fermentation and not a chemical mixture. Vaccination against smallpox has been employed for centuries in India and China, it was accidentally discovered and empirically used. The first record of its application in Europe was in Belgrade, Serbia.

The first general and accepted statements concerning bacteria, their types, diverse activities and association with disease, their values and dangers in the applied arts came from Pasteur. His statements were remarkably clear, were easily proved as applied to household preparations, and agricultural and animal industries. These simple truths were readily appreciated and in fact in certain lines they had been employed

for many centuries but without being understood by the people. Drinking water for instance, had long been recognized as a danger to man and water borne infections are still probably his greatest menace. The Oriental developed the safety of boiled water; thus came the drinking of tea and coffee which were easily prepared and often carried on journeys, while Europe especially developed the weak brewed liquors and wines, in which by fermentation the coarser and harmless germs destroyed the virulent ones.

Lister did not develop the theories of germ life but he was the first man of note to grasp the wonderful importance of Pasteur's work and apply it to surgery. While his methods were complicated and crude they served their purpose, and stimulated thought on the subject. Many of the methods were soon replaced by simple and more effective ones making possible the ever increasing development of surgery and bringing the eye to our aid in viewing disease conditions in the living supported by the microscope in the study of the invisible.

All multicellular organisms are subject to natural death, they decay following maturity, only unicellular organisms continue the process of multiplication by division of cells and the resting in spore form through lack of proper environment, yet ever ready for re-development as opportunity offers. Most of the diseases which destroy human life come through infections of the organism by bacteria. We now know that what is called self limitation of disease is the period required for the destructive efforts of the blood and tissues against bacteria and their toxins to become manifest. This is a response of the blood and its leukocyte policeman which are always on hand and by irritation and proper reaction call out the reserve of billions of phagocytic soldiers. By reason of the life and death of bacteria in the blood there is developed the opsonin, a constituent of the blood which cannot be seen but which acts by preparing the food (bacteria) for the leukocyte which otherwise resists phagocytosis. Modern medicine appreciating the development of antibodies in the serum of animals has bent much of its energy toward developing the therapeutic application of this principle. Thus we have serums and vaccines which save thousand of lives even when disease has started, as in diphtheria, and an enormous number are saved by prevention as in smallpox, typhoid, typhus, cholera, tetanus, etc.

How curious it is that Hannaman and his school came so near these great discoveries and just missed them in their doctrine of *similia similibus curanter*. Their efforts were bent in the

right direction but were limited to the use of drugs which modern medicine is reducing to but few in number as compared with the past and these having definite effects on the circulation, the nerves and the body secretions. The whole trend of medicine has turned toward a study of methods of repair of the body tissues and fluids, considered as a laboratory, all efforts being made to favor the development of resistance. The large drug houses have quietly followed the trend of medicine, or rather the trend of medicine away from so-called drugs. They are now advertising special serums, antitoxines and blood tests and we no longer hear of the new remedies from roots and herbs procured from some distant country with great difficulty, extraordinary expense and loss of life.

How glorious was the death of the men who lost their lives in a study of those bacteria which had in part been spent in an intermediate host. How simple now is the prevention of such diseases as yellow fever and malaria by the destruction of the mosquitoes and their shutting out by a screen, the control of typhus fever by mere body cleanliness in keeping free from vermin and, where cleanliness is impossible, as in war, by the use of serums. The antityphoid serum has proved of enormous value in the prevention of disease by developing an immunity against the dangers of impure water to which travelers and especially soldiers are necessarily exposed.

The next advance was the realization that the germs of disease actually live in the blood which was appreciated in the past as only occurring in pyemia and septicemia. A drop of blood from the ear in pneumonia cases cultured early in the disease will show a pneumococcus growth almost as soon as the disease can be surely identified by ordinary methods, and more surely in the obscure cases. Warfare on bacteria which float freely in the blood is exceedingly difficult except as it is carried on in the peripheral circulation and in the local areas where the disease is active and which we identify as the local manifestation peculiar to typhoid, pneumonia, measles, smallpox or other diseases.

The next advance in medicine came from the results of the work of such research investigators as Rosenow who has proved conclusively that many or most of the so-called local diseases such as appendicitis, cholecystitis and ulcers of the stomach are bacterial in origin and that the attack on the mucous membrane is not on the surface but through the blood as a destructive infarct, the bacteria being carried by the circulation to the base of the mucous

glands, the unprotected rear so to speak. These conditions can be experimentally reproduced. For example, after removal of an appendix filled with pus a culture is made which shows colon infection, the appendix is opened, washed, seared in a flame to destroy surface bacteria, crushed or ground to a fluid state and a culture from this material will often show a diplococcus or streptococcus as the real cause of the disease, the exudation from which had become inoculated by the colon bacillus to which it was freely exposed. This culture injected into the veins of one of the few animals having an appendix, the rabbit, will in two-thirds of them produce lesions in the appendix, such as hemorrhages, erosions and various forms of destruction of the mucous membrane. In nearly one-third of the animals there will be no change, the bacteria being destroyed or eliminated before reaching the location of this particular environment. In those in which there is a result, while the appendix would be the most common tissue involved it would not necessarily be the only one as in some there would be infarcts of the kidney, effusion in the joints and myocardial changes as various side lines of associated inflammation. This is true of diseased gall-bladders and excised ulcers of the stomach and duodenum as well as joints in rheumatism. That these infections are variable and multiple is explained by the studies in rheumatism and reproduced rheumatism. The pneumococcus and *Streptococcus hemolyticus* and *Streptococcus rheumaticus* and *Streptococcus viridens* have been made by Rosenow to change or transmute from one to another by changing their environment. This greatly simplifies our study of bacteria and our appreciation of disease both general and local, as by it we accept the fact that the pathogenic bacteria of varying degrees of virulence have their selective affinity because the tissues involved afford an environment similar to that from which they came. It may soon be proved that diseases of the nerves, like sciatica, ticdoreaux, herpes, neuralgias and similar disease arise from bacteria distributed by the blood from small foci of infection more or less under tension, as in the tonsil, at the root of teeth or a blocked nasal sinus.

Relapses occur from the chronic character of the trouble which breaks down instead of increases the immunity, as anaphylaxis. Through the occasional slight delivery of these toxins there is an increase or relapse in the local manifestations, just as is seen in a local tuberculous process from the use of tuberculin in an effort to increase tissue resistance. In this line should be included the infections of the respiratory tract

such as asthma, pneumonia and lesions of the valves of the heart. In asthma wonderful success has been reported from the removal of local foci of disease affecting the respiratory tract. From open surface infections such as pyorrhea, open diseased tonsil crypts, open sinus and bacteria absorbed from the large bowel come rheumatoid troubles and joint deformities. It has been proved too often to be a mere coincidence that the therapeutic elimination of bacteria from the large bowel or the removal or short circuiting of large sections of the colon in constipation has produced wonderful results in the cure of rheumatoid arthritis. Years ago Metchnikoff stated that he thought the large bowel was a mistake and that human life would be lengthened by its removal, stating that the toxins of its bacteria was a cause of endarteritis and that it probably had more to do with advancing age than time.

The reports of research work by foreign investigators, especially that of Poynton and Paine, most of which has been based on autopsy, and in our own country the numerous investigators such as Dick, Davis, Rosenow, and others, in several fields of research have marked a definite path for the future of medicine. We have long and vaguely connected certain inflammations of the iris with rheumatic troubles, more directly have associated certain inflammations with gonorrheal toxins, the direct connection being evident and it has long been said that lues may simulate almost any disease and affect all the tissues of the body; thus obscure lesions have often been attributed to this cause. We now know that the specific living bacteria starting from a central focus traveling in the vascular system makes secondary deposits in these various tissues of the body according to their affinity. The side lines of involvement are due to some variation in culture of apparently specific types of bacteria, but the main or essential manifestations can be reproduced in the animals over and over, giving a definite percentage of localizations in similar tissues from cultures carried from man to animal. Rosenow is able to induce inflammations in the appendix of rabbits from strains of human appendicitis in 68 per cent. of sixty-eight rabbits injected. From strains grown from ulcers of the stomach and duodenum, inflammations, hemorrhages and ulcers were developed in 75 per cent. of 103 animals injected, while bacteria grown from inflammations of the gall-bladder produced lesions of the gall-bladder in 80 per cent. of forty-one animals injected. Of course many side lines of infection were also seen. These are but a few of the many diseases that we have long con-

sidered local entities and which now must be classed as a result of secondary lesions derived from a small original focus some place in the body. As to the local foci of infection, there have been found nearly sixty varieties of bacteria in the mouth, normally there may be but a few to a dozen types. We have about the teeth pyorrheas, cavities, blind or apical pockets, open crypts or buried pockets in tonsils where bacteria are commonly harbored. Such tonsils are not necessarily enlarged, teeth with apical pockets may have no pain and look normal but the roentgenogram will show these cavities very distinctly. The strains of bacteria delivered to the vascular stream may in one case affect the iris or cause retinal hemorrhages, in another cause ulcer of the stomach or duodenum or cholecystitis or appendicitis, a fallopian tube inflammation or a joint involvement. As known in human beings and proved in animals one or two secondary foci of infection may be derived from the same strain which would necessitate, under present conditions of examination, the patient being required to visit specialists in the various fields of medicine while a good dentist or throat specialist would have cared for the local focus and effected a cure unless the secondary lesion had produced a local destruction of tissue resulting in permanent impairment of function. How long are we to continue to talk about uric acid in rheumatism? The crying need today is for more diagnosticians and better team work in diagnosis hospitals. We have been too long dealing with end results of local foci of infection as entities as a result of erroneous deductions from autopsies instead of a study of disease conditions in the living.

A SERIES OF BRAIN CASES*

ALANSON M. POND, M.D., F.A.C.S., Dubuque

Operations upon the skull are among the oldest known procedures of surgery. Trephining was practiced by the ancients and many skulls found in the oldest burial places bear mute testimony to the skill or the courage of some of our professional ancestors.

Hippocrates incorporated the operation of trepanning in his classic oath, and Galen was known to have some knowledge of the operation of opening the skull.

Brain surgery however, has not kept pace with the advance of the art in other parts of the body; for instance, the abdominal cavity has been in the surgical spot-light for nearly a half century.

The osseous system is just now the popular

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field of work and investigation; the general result of which will be a greatly increased knowledge of the principles of practice, the better understanding of bone and its tissues, and the ultimate improvement or cure of many unfortunate members of society.

The obstacles surrounding the opening of the skull have perhaps contributed their share of reasons for the comparatively small amount of work done in brain surgery, when compared with the surgery of the thyroid, intestinal tract, or bones by the general surgeon; to say nothing of the enormous amount of work and research on the eye, ear, nose and throat by specialists and dentists.

The general hazards surrounding the opening of the skull are infection, hemorrhage, cerebral localization, and operative security.

The chance of infection is commonly from the inability to cleanse the scalp, which is an anomalous structure. There is in the body no other covering or membrane that is comparable to it in any way.

It is usually covered with hair for its greater extent; is freely supplied with sebaceous glands; the hair is oily and in its exposed location becomes very dirty. Every case of brain surgery should be preceded by a complete shaving of the head; this practice should become a general routine in hospitals.

This shaving not only removes the oily, dirty hair, but gives opportunity for the discovery of scars otherwise overlooked in examination and forgotten by the patient. The shaving also acts as a dermal curette and not only cleanses the surface of the scalp but clears the openings of the glands from the oily substances of their secretion. After shaving, the head should be thoroughly cleansed with alcohol to dissolve the grease of the soap necessary for the shaving, as well as to further cleanse the surface from the secretions.

The area under operation is now painted with a freshly made solution of re-sublimed iodine in alcohol; 46.2 grains to the ounce. The entire head should then be covered with two layers of sterile gauze held tightly in position by an elastic band encircling the head just above the eyes, above the ears and as far back towards the external occipital protuberance as possible, the band may be secured by tapes. The incision may be made through the gauze dividing the scalp to the firm resistant surface of the skull beneath.

Vessels of the scalp if not occluded by the elastic bandage encircling the head, may be secured by snaps.

The pericranium is incised to carefully conform to the outline of the scalp incision and is

separated from the skull a short distance proximal and distal by an elevator and carefully protected from injury during the opening of the skull by trephine, saw or chisel.

The hazard of hemorrhage increases with the amount of work undertaken within the skull. It is as a rule easy to recognize the principal arterial trunks extra-durally, and when the dura and arachnoid are incised the vessels of the pia-mater are easily seen and ligated.

The vessels take a general course from the base of the skull to the longitudinal sinus; spreading from a point above the ear like the ribs of a fan over the surface of the brain. Incisions should, therefore, so far as possible, be made parallel to these trunks.

Any operation that contemplates the destruction of bone near any of the large sinuses of the skull should be very cautiously undertaken with means at hand to promptly control hemorrhage should the sinus be injured or sectioned. This should be undertaken by open exposure surrounding the sinuses with dural flap, or suture and ligation, or the hemorrhage controlled where this is impracticable by reason of adhesions or other pathology, by plugging the sinus with catgut or by suture with a fine needle.

The two great dangers of sinus injury, or section are hemorrhage and air embolism. The former can be prevented if the surgeon is sure of his regional anatomy, the latter is really a theoretical hazard and is so rare as to be almost negligible.

The cases reported in this series comprise twenty-two operations classified as follows:

Brain abscess four—Two of these cases were infections from fracture; one of the anterior plate of the frontal sinus, and the other a fracture of the anterior fossa followed by infection through the nose. Two were extension of infection or metastatic abscesses from an otitis media, one of the cases followed an acute attack of lobar-pneumonia; the other was of uncertain origin.

Brain tumors five—Three of which were of luetic origin or gumma and were operated upon as a temporary procedure to save the patient serious immediate consequences of cerebral compression, such as structural damage to the vision, and to relieve the constant maddening headache as well as the depression of circulation. Specific treatment was immediately instituted following the relief of brain compression.

One of the tumors was a cyst and one was a sarcoma.

There were three operations for the relief of epilepsy, two of which were of traumatic origin.

In one case of idiopathic epilepsy a sub-tem-poral decompression operation was done followed by a relief of attacks for about eighteen months.

Fractured skull ten cases; six cases of fractured base; two cases anterior fossæ and two fractures of the middle fossæ.

Two cases of abscess are worthy of consideration.

A young man, brakeman, suffered an injury of the face above the right eye near the mid-line. He was knocked down, but soon revived and went about his duties. There was a small punctured wound above the right eye which seemed and looked insignificant. Three days following his injury he sought relief for an incessant headache which remained unrelieved until the eighth day when I saw him. His temperature was 102.6, pulse 90, skin moist, complained of a terrible headache centering over the right eye, this pain was greatly increased by percussion. History was carefully taken and a suspicion entertained of fracture of the anterior plate of the frontal sinus. Blood examination showed a leucocyte count of 12,000. Exploratory operation was consented to as it was impossible to make a positive diagnosis.

The right eye-brow was shaved and an incision followed the course of the hair-growth about an inch and a half. The skin was retracted and a fine fracture was discovered in the anterior plate.

A trephine opening was made just to the right of the mid-line which included the fractured area of the frontal plate, and was removed. About a teaspoonful of pus escaped and some blood clot in the state of decomposition removed. Drainage was established down through the nose by a piece of gauze; the wound over the eye was closed and the bandage applied. This was done about three-thirty in the afternoon; at nine o'clock the following morning he was found with a normal temperature, normal pulse and freedom from pain. The gauze was removed at the end of twenty-four hours and the patient was discharged at the end of a week.

The points of interest in this case are to be drawn from the apparent innocence of this wound; followed in three days by the beginning of headache which resisted all medical treatment, and showing at the end of eight days the increased temperature and pulse rate and the high leucocyte count all pointing to a traumatic septic thrombosis of the frontal sinus. The finding of pus upon the removal of a button of bone which included the fracture, the rapid and complete subsidence following operation and drainage, confirms the diagnosis and certainly warranted the operation.

Abscess No. 2. Boy aged thirteen years. Seen in consultation April 27, 1909. History of lobar pneumonia the preceding October; followed by an acute otitis media, which was treated by hot applications and the alkaloids of opium and some coal tar products. Complains of constant headache,

mental state, was drowsy and was with difficulty aroused to speak, and then answered only in monosyllables, there was ptosis of the left lid and motor disturbance of the right upper extremity with some muscular rigidity of the right lower limbs. Motor functions of the right arm were limited and the left pupil was dilated and irresponsive to light. The patient was apathetic and would take only small amount of nourishment in a liquid form. Temperature was 101.6, pulse ranging from 50 to 60 and of very high tension. Blood examination showed a leucocyte count of 15,000. A spinal puncture was made in the hope that some of the fluid might be obtained which would clinically confirm a diagnosis of metastatic abscess which was suspected, no fluid was obtainable. Percussion of the head, especially over the left side, was exceedingly painful, and when done would arouse the patient from his indifference and he would moan and move his head away from the position of examination.

Dr. Langworthy was asked to see this case and make the examinations of the eyes and ears. Appended is his report as follows:

Eye, Ear, Nose and Throat Examination by Dr. H. G. Langworthy, Dubuque, Iowa

Right Eye—Pupil very slightly dilated but reacts well to light. Movements of ocular muscles practically normal except at times there seems to exist a perceptible tendency toward conjugate deviation of the head and eyes to the left.

Left Eye—Faint line of old scar along lower border of brow. Globe deviated outward and downward. Limitation of movement, amounting to almost total paralysis, in all other directions. Pupil widely dilated, slightly irregular, reacts very sluggishly, and sometimes not at all, to light. Cause of pupil irregularity two or three old iris adhesions uniting iris to lens superiorly. On account of mental torpor, vision not obtained but probably nearly normal. I was strongly of the opinion that a right homonymous hemianopsia existed as the patient seemed to pay little attention to manipulation of instruments, hand lense, etc., when brought near the right half of the eyes.

Fundus—Bilateral choke disk of moderate degree and clearly more marked in the left eye. Few very fine hemorrhages, both eyes, but fundus disturbances not widespread.

Ears—Both membrana tympani very slightly retracted, otherwise normal. Hearing tests not made. No sign of recent trouble anywhere about the middle ears or mastoid region.

Nose—Both nasal fossa carefully examined. Slight catarrhal crusting. No evidences of a suppurative condition established in either nostril which could be considered as a focus of infection.

Remarks—Paralysis of the third nerve was evidently responsible for the deviation of the left eye down and out and the extreme dilatation of the left pupil. The fourth, sixth and seventh nerves had apparently escaped. Twenty-four hours before death optic neuritis slightly increased in both eyes with

more extensive fundus changes. Although the history was not at all full, from the existence of a very slight paralysis of the right arm, as evidenced by lack of strength in the hand grip, rigidity and contraction of the muscles of the lower limbs from cortical irritation, presumable right homonymous hemianopsia, marked rigidity of neck muscles, optic neuritis and the suggestion of conjugate deviation of head and eyes to the left, the probable diagnosis of cerebral abscess of the left side deeply situated in the middle fossa about the region of the internal capsule was made.

Patient was operated upon by making an opening in the skull over the left temporo-parietal region and rather a large rectangular musculo-osseous flap turned downward from above. The dura bulged perceptibly into the opening and was not pulsating, in color it seemed normal except perhaps the veins were somewhat more prominent. The dura was incised and there immediately escaped a small amount of fluid free from even a suspicion of pus. Search was then made for an area of increased density of brain structure with the finger as suggested by Sir Victor Horsely who eloquently states as he holds his index finger aloft. "Gentlemen—Here is an instrument for use in brain surgery that serves as a probe par excellence; for not only does it splendidly perform every function of the ordinary probe, but possesses qualities that are extraordinary, viz. the sense of touch; a probe with an eye."

An area of increased density was detected by the finger high up toward the commissure in a sulcus of the anterior frontal lobe in the facio-brachial region. A small trochar was cautiously guided by the finger to this spot of density and was carefully pushed into the resisting mass. The obturator was withdrawn and a quantity of greenish, yellow pus flowed out of the canula. Smear was taken of this pus and later was identified as an infection from pneumococcus.

The canula served as a guide for the knife, and a small incision was made and the cavity was carefully dried with sterile gauze. A wick of gauze was loosely packed in the cavity and brought out through the dura, the button hole of the trephine, and left outside the scalp after suturing. The wound was closed and dressed, and the patient was returned to his room in a very good condition.

The second day a hernia of the brain occurred which was undoubtedly of septic origin, and the general condition was decidedly grave. He died about seventy hours after operation.

It is scarcely necessary at this time to call attention to the frequency of otitis media as a sequelae or complication of lobar pneumonia.

It is worth while however, at this time to comment upon the attempt which should be made in every case, to prevent such brain abscesses. Had the attending physician made the practice of examining with a head mirror in a good light, the tympanum of these cases, he would undoubtedly have found at some time during this acute ear complication a bulging of the tympanum, and had

he simply incised this membrane and drained the cavity immediately back of it, this melancholy story would not have been told.

Epilepsy—Three cases were operated upon for epilepsy.

Two of these cases were of the Jacksonian type of traumatic origin, and one was for idiopathic epilepsy.

The operation for idiopathic or true epilepsy was done in a man twenty-nine years of age and was undertaken with a remote hope that his seizures might have been of traumatic origin, as the history taken disclosed an accident at the age of seven years which was followed by unconsciousness.

A simple sub-temporal decompression operation was made. He remained free from attacks for about seventeen months and then relapsed, his attacks occurring with increasing frequency until he was having a seizure about every three or four weeks. At the last report his condition showed no improvement from his condition before operation. On the other hand the operation did him no harm.

One of the cases of Jacksonian epilepsy deserves comment.

J. D. S., age forty-two years, merchant. No history of nervous or mental disease in the family. No history of alcohol excess or venereal infection, man of ordinary intelligence. Answers questions promptly and clearly.

At the age of twenty-two years in the year of 1887, he was struck by a falling stone while digging a well. Was taken out of the well in an unconscious state and continued unconscious for eight hours, then remained in a semi-conscious state for several hours.

There was a wound of the right side of the head near the parietal mid-line suture and the occipital suture. At the time of examination there was a depression of the right parietal bone. He recovered from his accident slowly and was apparently in normal health until about two years afterward when he had a convulsion. These attacks of convulsions recurred and increased in frequency. Occurring usually at night and involving at the beginning of the attack the lower extremity of the left side, the spasm would rapidly pass to the upper extremity and finally involve the head which would be sharply turned to the left side.

In the morning following his spasm his mouth would be found bloody and once or twice his tongue was bitten.

He was removed to the Insane Hospital at Independence where he was under treatment from 1888 to 1901—thirteen years. He was released from the hospital under the supervision of friends and relatives.

He had a distinct aura characterized by a "buzzing" in his ears, rapid deglutition and beginning

vertigo, so that he could usually foretell the oncoming spasm and by giving careful attention to elimination and a restricted diet which he had learned played some part in his "fainting spell," he was able to get along with the least possible inconvenience.

He was in the second hand furniture business and trading.

Failing vision brought him to his family physician and I saw him in consultation November, 1908.

There was a deep depression in the skull at the site of injury and a wide scar, devoid of hair in the scalp.

The reflexes of the ankle, knee and elbow were markedly exaggerated on the left side. Babinsky and Oppenheim were present. Marked atrophy of the disks of both eyes, more marked in the left. Patient was unable to read the ordinary print of a newspaper.

Dr. Langworthy was asked to examine the eyes and handed in the following report.

Name—Smith, Mr.

Res.....Date—Nov. 17, 1908.

Case of Dr. A. M. Pond.

Operation—Cranial Decompression (Dr. Pond)

Eye examination:

20

Right Eye—V. O. D. —, homatropine 20/200 + 1.00
70

S = + 1.50 CAx90 = 20/70+.

White and quiet, cornea clear. Iris good color. Question at times of right pupil reacting somewhat sluggishly to light. Tension normal.

Fundus—Changes in nerve head: Disc form lost, increased redness. Very slight papillitis but swelling not sufficient for accurate measurement.

Changes in Vessels—Veins full and dark but not especially tortuous. No distinct hemorrhages.

Left Eye—V. O. S. 20/30—, homatropine 20/70 + 0.37S = +0.87 CAX 90 = 20/40—.

White and quiet, cornea clear. Iris good color and reacts well to light.

Fundus—Nerve head: Disc easily made out and outer edge clear cut. White markings of disc beginning to appear. Veins slightly dark. Vision for color in each eye defective.

Diagnosis—Right Eye—Optic neuritis. Left Eye—Optic neuritis with beginning post-neuritic atrophy.

It was decided to do a craniotomy in the right temporal region, sufficient in extent to relieve the increased tension caused by the depression. Leaving the site of injury undisturbed by reason of the probable obstacles to thorough operation caused by the healing of the skull and dura and making a new opening to compensate for the lessened area of skull contents, as advised by Heidenhain, Krause, von Bergmann and Horsely.

The patient was operated upon in a clinic. A quadrilateral area was formed in the skull with its base close to the zygoma. Three sides of the area was sectioned by trephine and rongeur. An eight in. forcep was placed tranverse to the base and the upper margin slightly elevated with a chisel and the forcep struck a sharp blow with a mallet which

fractured the plate of bone near the zygoma, leaving the pericranium and attached muscles undisturbed on the segment of bone turned down.

The dura was tense and pulsating only at the lower anterior corner; a crucial incision was made diagonally from corner to corner. A slight discharge of fluid followed with a sagging of the arachnoid and pia mater to conform to the contour of the cortex.

There was decided bulging of the cortex, the veins were enlarged and full. It was decided to remove the bone from the flap to permit of the relief of compression. The pericranium was preserved and carefully sutured, the scalp flap with the muscles was closed and a snug bandage applied. The patient left the table in excellent condition. Later in the day there was some disturbance of respiration which promptly disappeared after loosening the tight bandage.

He remained in the hospital ten days, during which time his recovery was tranquil and with a rapid regaining of strength. He was asked to report to me every six months. The first report stated that he had had no spasms and that he thought his vision was improved. The second report was to the effect that he could read a newspaper and had no spasms, the recovery seemed complete in every way and after three years he was lost sight of completely.

Considerable work is at present being done to relieve the common condition of epilepsy, with varied success, for instance:

Krause is excising the spasm center after ingeniously locating the area by weak faradization. All of his work bears the stamp of earnestness of purpose and give promise to some brilliant and lasting results.

Kocher makes a valve of the resected portion of the skull which permits the rapid increase of cerebral tension which so constantly characterizes an attack of epilepsy. His results seem justified only in a certain class of patients.

It must be distinctly remembered however, that epilepsy is not a uniform disease. It is as impossible to classify epilepsy as it would be to classify the temperamental peculiarities of people. The term epilepsy is very loosely applied to any periodic convulsion which may occur at varying periods.

Our greatest hope of cure in these cases lies in first very carefully considering the neurological features in each case and carefully eliminating spasm arising reflexly from irritation of the stomach, gall-bladder and intestines. When this is thoroughly done as a routine in the examination of these cases, it is altogether probable that a larger number of cases of true epilepsy will be sifted from the cases of reflex origin, and surgery of the head may come into its own. Obviously if the spasm is due to reflex irritation of the upper abdomen or intestine, an operation

upon the head would hardly be expected to be fruitful of much benefit.

Fractures—There were ten cases of fractured skull, six of these were extensive fractures of the base. Two were fractures of the anterior fossæ and two were of the middle fossæ.

Of the six cases of fractures of the base, five of them died as a result of the extensive laceration and hemorrhage which continued after craniotomy and attempts were made to control the bleeding. I do not include these cases in the fatal cases of surgery, as they did not die as a result of the surgery attempted, but in spite of it.

Fractures of the base of the skull usually occur along fixed lines and partake of the fissure type involving two or more of the fossæ. These cases are at present best treated by the time honored method of rest, ice and supportives; unless symptoms of compression make the opening of the skull imperative to sustain life. Such cases usually prove fatal, but occasionally they are successfully treated, especially is success expected where the active hemorrhage has ceased and the clot can be found and removed without too much exploration.

The extreme gravity of these cases justifies the opening of the skull in any event; for if the hemorrhage has ceased or can be controlled, and the clot removed, they give promise of recovery in an otherwise hopeless class of patients.

One of the cases of fracture of the anterior fossæ developed an infection the ninth day after operation at which time a diagnosis of subdural clot was made, located and removed. Patient regained consciousness and in a few days wanted to go home, regained strength rapidly and was considered out of all possible danger until the night of the sixth day after operation patient had a chill and temperature went to 104.3, the wound was found to be red and inflamed and was separated in the hope that the pus could be located and drained. Blood examination showed leucocyte count of 17000. He was treated with the streptococcus vaccine but did not improve and finally died. This infection unquestionably proceeds from the scalp, and justifies the importance put upon the preparation of the patient in the foregoing paragraphs of this paper.

Brain Tumors—There were five operations made for tumors. Three of these were for relief of symptoms occurring during tertiary syphilis, rapidly occurring blindness and motor disturbance. A simple decompression operation was made and specific treatment instituted. In each instance the treatment seemed to be justified as the patients recovered without permanent damage to vision or any permanent restricted motion.

One operation, really exploratory in character,

revealed a cyst, which was drained, as it seemed impossible to remove the sac from the brain substance. The cyst rapidly reformed causing death about twenty months after operation.

One case proved to be a sarcoma involving a part of the dura and after exploration was thought to be inoperable and went on to a fatal issue in nine weeks following operation.

Statistics—Of these twenty-two operations, but one fatal case could be ascribed to the surgery or after care. This was the case of a fissure fracture of the anterior fossa which developed infection the sixth day following operation.

Surely the fatal cases of fractured base could not be laid to the surgery attempted as in each instance death occurred from six to twelve hours after operation.

The death in the case of metastatic abscess could not be ascribed to the surgery of the brain, because the finding of the abscess with the identification of the infecting agent which could be directly traced to the attack of pneumonia in the history, shows that the infection had long continued in the brain and the hernia following the operation was but a sequence of the septic tissues. The summary of the series is as follows:

| | Cases | Recovery | Imp. | No Imp. | Death |
|-----------------------|-------|----------|------|---------|-------|
| Brain abscesses | 4 | 2 | | | 2 |
| Epilepsy | 3 | 2 | 1 | | |
| Fractures | 10 | 4 | | | 6 |
| Tumors | 5 | 3 | | | 2 |

While in the above twenty-two cases death occurred in ten of the cases, the mortality still remains low from a surgical standpoint, for but one of the cases really perished as a direct result of the operation.

In conclusion let me say that exploratory craniotomy should take its place among the recognized operations of surgery. For years we have been performing exploratory laparotomy and have been justified in it, and many of these vague brain cases which do not respond to medical treatment may very profitably be explored with the reasonable assurance that if the pathology of the condition is not determined the life of the patient may not necessarily be sacrificed.

Discussion

Dr. C. E. Ruth, Des Moines—I was greatly pleased to hear this excellent paper. It emphasizes to my mind especially the fact that if we will be careful to relieve the brain of pressure, it is wonderful what amount of trauma, sepsis, and destruction of brain tissue will be tolerated by the individual, and his functions and future usefulness be but slightly impaired. This has been definitely determined by the recoveries that take place in many cases of abscess of the brain of large size, holding two to four ounces of pus, and in which the destruction of brain tissue

is enormous; and in the other class of cases indicated, those of damage done for instance, by the passage of a thirty-two to thirty-eight caliber bullet through two or more lobes of the brain on one side and an immense amount of brain tissue simply pulpified. When compression is prevented or promptly relieved by operation and drainage, a large percentage of these patients will recover, and many without a particle of impairment of function.

Two such cases have occurred in my experience, one within the last few months where the right parietal and right posterior lobes of the cerebrum were pulpified by the passage of a thirty-eight caliber bullet, the ball splitting into three pieces none of which have been removed, and the patient is perfectly well, without a single motor, sensory, intellectual, or other sign of disturbance except that the bullet in its passage cut off the optic nerve and necessitated enucleation of the eye. When the patient came into our care we turned down a large flap opposite the point where the bullet had struck the inner side of the right parietal eminence after passing through the nose, sphenoidal fissure and right middle cerebral lobe. The pulse at that time was 44.

In another case, one of abscess of the brain, I found that the patient had been profoundly comatose for fourteen hours. We opened and drained the abscess, which was due to chronic middle ear disease, the abscess discharging at the time two ounces of pus. Seventeen days later we had a repetition of this experience, the abscess cavity in this case discharging three ounces of pus, after which the patient recovered.

In cases of epilepsy, we must not forget that even removal of the ovaries, in fact any operative procedure which is indicated in the case, has shown favorable results as to epilepsy. Every case of epilepsy, so far as I know, is a gormandizer, and a large majority of such patients are suffering from intestinal stasis.

Dr. F. A. Ely, Des Moines—From a diagnostic point of view, I am very much interested in all facts pertaining to surgery of the brain. In the matter of operative procedure for epilepsy, I am impressed with the fact that, to use somewhat the term used by Dr. Wahrer in connection with appendicitis, the essayists of the morning, Dr. Reed, and Dr. Pond, have found the "squealing" organ in this affection located in such widely differentiated portions of the human economy that one would hardly know where to operate. Most operative procedures for epilepsy have, I believe, been a snare, a delusion, and a failure, yet at the same time it offers a promising field to one who enjoys surgery, for the reason that the poor individual suffering from this complaint comes to you ready to die anyway and will be glad to die, and he is ready to submit to almost any procedure.

Outside of the general conditions pertaining to Jacksonian epilepsy, it seems to me we have never gained any particular results from surgery.

With reference to some of the indications for brain operation, I would like to mention two little points it has been our opportunity to observe in con-

nection with these cases, which I think are very interesting. In a case of Dr. Page's from which we subsequently removed successfully a sarcoma of the right parietal region, the first symptom in the case was a Jacksonian epilepsy of the right face. The tumor ultimately was found in the right parietal region of the cortex. We are fully familiar with the fact that very often we have what are known as false localizing symptoms of intracranial pathology. Soon after the epilepsy of the right face appeared, there occurred similar attacks in the left face, and those of the right face gradually grew less while the spasms of the left face persisted. Following this we had a gradual development of paresis of the left face and left upper extremity.

The point of interest in connection with this case is that we ultimately removed a tumor from the right cortex. The Jacksonian attacks were originally in the right face, and the only way I have been able to account for this has been in the transmission of pressure across the cerebral hemisphere sufficient to produce irritation on the opposite side. Of course, there is a possibility of two tumors, but the patient subsequently recovered without any other symptoms.

Dr. Ben C. Everall, Waterloo—I would like to ask Dr. Pond what has been his experience, if any, with post-operative hernias of the brain. I have been unfortunate enough to be obliged to dress a few cases in which somebody had done a decompression for luetic conditions. My impression is that few of these cases are benefited by this procedure beyond the first few days or weeks, and that in quite a percentage of them, hernia develops immediately. In the few cases I have seen where the dura was opened, not one recovered if the hernia was great enough to produce pressure. My impression is that the farther we can keep away from the original site of the growth, the better off we are in doing a decompression. If you are going to decompress for luetic trouble of the brain, do it on the opposite side, otherwise some poor interne or you yourself will have to scrape brain substance off the wound.

Dr. D. S. Fairchild, Clinton—The subject of infections of the brain coming from middle ear disease, throat trouble, etc., is full of interest. Our views have changed very materially since the fact of these various infections reaching the brain has been worked out.

Quite a number of years ago I was consulted in relation to a medico-legal case where, in some trouble between two neighbors, one of the men struck the other, and in two or three days the man attacked died. Post-mortem examination showed that he had an abscess of the brain, and the allegation was made that it was by reason of the blow that the abscess was formed and produced the death of the individual. This was before the problem of throat and nose and middle ear infections had been worked out, and so the question was before the courts as to whether or not this man should be held for manslaughter because he had inflicted a blow upon the head of an individual who later died of abscess of the brain. We now know that the ab-

cess must have existed when the accident occurred. And so it is a question having a very wide range of interest.

Dr. Pond—In the determination of these metastatic abscesses, the history of the case, of course, leads us directly to the suspicion of such a condition, and the most constant, unvarying symptom is headache, with the blood findings, for there is always a high leucocytosis in these cases. In locating the abscess we must be guided by the findings of motor impairment. These abscesses are not infrequently located on the cortex. The easiest, simplest, safest and best method of finding the abscess is by the bare finger or at best the gloved finger. Sir Victor Horsley is a man of such ripe experience in brain surgery, that we can well afford to take his statements at face value, and when he tells us the best probe for use on the brain is the bare finger or best the gloved finger, I am willing to take his word for it. This is the best means whereby to detect the area of disturbance. This area of increased density will lead you more surely to the side of the abscess than any procedure with which I am familiar.

Referring to Dr. Ely's remarks, I want to say now, as stated in my paper, that epilepsy is a term loosely applied to any condition characterized by local spasm, irrespective of origin. Without doubt the future of brain surgery will be dependent upon our neurological diagnosis, and sifting the cases of irritation due to infection or trauma or stasis of the bowels, stomach and gall-bladder, from those cases of true epilepsy. I am quite confident that the surgical problem of true epilepsy is not far from being solved, and completely, perhaps not in every case, but in many.

If you will take the time to read the late work of Krause very recently published and which has been translated into English, you will find that he describes here his method of locating the spasming center by artificially producing, by means of weak faradization, the convulsion from which the patient is suffering. He then excises the offending center, and has reported some most brilliant results.

Regarding Dr. Everall's comment on subtemporal craniotomy as a therapeutic measure, in some cases I did a subtemporal decompression for the paraplegias of tertiary syphilis. I will say that Salvarsan was introduced intravenously immediately after the symptoms of blindness and motor disturbance, and in these cases we did not encounter hernia of the brain because we tried to keep away from the site at which we thought the gumma had its place. The only case of cerebral hernia occurred after operation for metastatic abscess following otitis media.

THE MEDICAL TREATMENT OF GASTRIC ULCER*

E. D. TOMPKINS, M. D., Clarion

In presenting a paper to this Society on the medical treatment of gastric ulcer, I want to state that I have nothing new or original to offer. The

treatment that I am about to outline is one that I have used with success.

I believe that the only time surgical treatment is indicated in gastric ulcer is after the medical treatment has failed. In uncomplicated ulcer the treatment will not fail if it is carefully and persistently carried out.

There seems to be quite a diversity of opinion as to the frequency of gastric ulcer. Some authorities claim that 90 per cent. of all chronic cases of stomach trouble is ulcer; whether this be true or not, it is a fact that ulcer is frequently overlooked. It is found in three to five per cent. of all autopsies. The best results in the treatment are obtained when the ulcer is recognized and treated early.

Gastric ulcer develops as follows:

A certain portion of the stomach wall loses its normal resistance to the action of gastric juice and becomes digested. There are numerous causes for this loss of resistance. Any factor producing malnutrition and necrosis will produce an ulcer. Rosenow's investigations indicate that a hematogenous bacterial invasion will have this effect.

Anemia and hyperchlorhydria are considered by some as the causative factor of ulcer, but I believe anemia, is more apt to be a result rather than a cause. Hyperchlorhydria may cause ulcer, but statistics show that in at least half of the cases of gastric ulcer the secretion of H C L is normal, and in about 10 per cent it is found to be sub-normal. However, a persistent hyperchlorhydria suggests ulcer, and its presence is unfavorable to the healing of the ulcer.

Gastric ulcer is furnished with a good blood supply and therefore it should heal as rapidly as an ulcer in any other part of the body. But this is not true because of the irritative and corrosive action of the gastric juice and the mechanical irritation caused by a food pressure peristalsis and active movements of the body.

Therefore the treatment of gastric ulcer is based on the etiological factors that cause the disease, and we have two main ends to accomplish: First: Reduce the corrosive action of gastric juice. Second: Remove the mechanical irritation as far as possible.

Gastric juice will not act in an alkaline medium, therefore, if we neutralize the acidity of the stomach we will prevent the irritative action of the gastric juice on the ulcer. By rest in bed and frequent feedings of small amounts, we reduce to the minimum the mechanical irritation.

In an uncomplicated gastric ulcer I have found that the treatment advocated by Sippy gives me the most satisfactory results. The fundamental principles of this treatment are similar to the so-called Leube treatment.

*Read before the Austin Flint-Cedar Valley Medical Society, Eagle Grove, Iowa, November 9, 1915.

The patient suffering with an uncomplicated gastric ulcer is given absolute rest in bed for two weeks and kept there from three to four weeks. The patient is allowed gradually to get around during the fifth week so that by the end of the week and during the sixth week he may be allowed to get out of doors and get back to work in a week or two more.

Beginning at about seven A. M. and continuing until seven P. M., the patient is fed every hour. The feeding consists of three ounces of equal parts of milk and cream. After four or five days, soft eggs and well cooked cereals may be added to the diet so that by the end of the second week the patient will be taking three ounces of the milk and cream mixture every hour, and in addition three soft eggs and about nine ounces of cereal, three ounces at a time, in twenty-four hours. The amount of food given at one feeding should not exceed six ounces. During the third week and in some cases earlier, custards, jellies, creams, stewed fruit, cream soups, and purees may be added to the diet. There is no *one* diet that can be absolutely followed in every case.

The age of the ulcer and its probable location makes it necessary to vary the diet according to the individual needs. The main diet however, should be the milk and cream mixture. Milk is selected as the best diet because it induces the smallest amount of secretion and fixes the greatest amount of H C L.

The small quantities taken at one time reduce the mechanical irritation and peristaltic action of the stomach. There are some patients that seem unable to take milk. This may be overcome in some instances by giving it with grape juice, tea or cocoa. The white of an egg may be substituted for milk if necessary, and frozen butter balls for the cream. Various milk and cream preparations may be substituted if the diet becomes too monotonous. Lean meats should not be given while the patient is under strict observation on account of the examination of occult blood.

Half way between each feeding and continuing every half hour after the last feeding for two hours, a powder containing ten grains each of sodium bicarbonate and calcined magnesia is given, alternating with the powder containing ten grains bismuth subcarbonate and twenty or thirty grains of sodium bicarbonate. In place of the last powder I sometimes use one consisting of bismuth carbonate, magnesium and ammonium phosphate and sodium bicarbonate. The magnesium and sodium bicarbonate powder may be given continually unless a troublesome diarrhea is produced. The dosage of the alkalis must vary according to the acidity of the stomach. It is determined accurately from the stomach contents what degree of acidity is present, and sufficient alkalis are given to neutralize it. When free

HC L is absent during the time food is in the stomach, the conditions are the most favorable for the ulcer to heal. This sometimes requires unusually large doses of the alkalis. One hundred grains and more of sodium bicarbonate have been given every hour.

The pain of gastric ulcer is caused by the irritative action of H C L on the raw surface of the ulcer. This is usually relieved after a few days treatment, and the acidity neutralized. Warm compresses applied over the stomach materially aid in relieving pain. The symptom of pain should be watched, and should it return under the treatment, it may indicate complications such as perigastritis, threatened perforation or secondary carcinoma.

When manifest hemorrhage occurs, an ice bag should be placed on epigastrium and a hypodermic of morphine and atropine is given. This will not only quiet the patient but relieve the mental condition caused by the hemorrhage. All stomach feeding should be stopped. In ordinary cases the bleeding stops after a short period of complete rest. There are a good many drugs used in excessive hemorrhage, but very few are of any benefit. Stiptics are useless. Adrenaline is sometimes of service. Ten drops of a one per cent. cocaine solution is sometimes used with benefit. Gastric lavage used carefully is a most excellent means of controlling excessive hemorrhage.

Stimulation should be guardedly used as it might overcome just what we are trying to accomplish. It is probable that either of vaso-constriction or the formation of a thrombus produces hemostasis. Strong stimulation therefore might dislodge the thrombus or cause vaso-dilation and start the hemorrhage again.

Pyloric obstruction due to spasm of the pylorus, and even a higher grade obstruction due to a cicatrix or induration, usually disappears as the treatment of ulcer progresses without any special treatment being required.

Other complications of ulcer such as secondary carcinoma, perforation into the free peritoneal cavity, perigastric abscess and perigastric adhesions, if interfering with the mobility of the stomach, are best treated surgically.

Uncomplicated gastric ulcer is not a surgical disease. It is only those cases that are carelessly treated that do not respond to the medical treatment.

The treatment is not difficult. There is a definite purpose to accomplish and we have the definite means to accomplish this purpose, and the results if the treatment is carefully carried out, are highly satisfactory.

Every case of ulcer should at first be put on a medical treatment, then if it is found that surgical treatment is necessary on account of some of the various complications, the patient is in better condition to stand an operation.

Iowa State Medical Society

**Sixty-fifth Annual Session,
Davenport,
May 10-11-12, 1916.**

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MEETING PLACES

Headquarters—Hotel Blackhawk
General Meetings—Burtis Opera House
House of Delegates—Ballroom, Hotel Blackhawk
Eye and Ear Section—Ballroom, Hotel Blackhawk
Registration and Exhibits—Moose Hall
Headquarters for Ladies—Mezzanine, Hotel Blackhawk

Rules For Papers

No paper before the Society shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes nor more than once on the same subject. This does not apply to the addresses and orations.

All papers read before the Society shall be its property. Each paper shall be deposited with the Secretary when read, and if this is not done, it shall not be published.

On arising to discuss a paper, the speaker will please announce his name plainly.

Please remember to REGISTER.

PROGRAM

First Day, Wednesday, May 10, 1916

9:00 a. m.

| | |
|--|------------------------------------|
| Call to Order by the President— | DR. W. B. SMALL, Waterloo |
| Invocation— | REVEREND MARMADUKE HARE, Davenport |
| Address of Welcome for the City— | CHARLES GRILK, Davenport |
| Address of Welcome for the Profession— | |
| | DR. G. H. HARKNESS, Davenport |
| Response— | DR. E. F. CLAPP, Iowa City |

SCIENTIFIC PROGRAM

MEDICAL AND SURGICAL SECTIONS

| | |
|---|--|
| Section on Medicine— | |
| Chairman, DR. GRANVILLE N. RYAN, Des Moines | |
| Section on Surgery— | |
| Chairman, DR. ALANSON M. POND, Dubuque | |

Wednesday Morning, May 10

9:30

1. The Examination of Spinal Fluid as a Diagnostic Procedure—
DR. J. S. WEINGART, Des Moines
2. The Pathology of Bacterial Infections—
DR. J. R. ALLEN, Waterloo
3. Renal Functional Tests—DR. C. E. VAN EPPS, Iowa City
4. Extravasation of Urine—Causes and Results—
DR. A. A. SCHULTZ, Fort Dodge
5. Address of the Chairman of the Section on Medicine—
DR. G. N. RYAN, Des Moines

Wednesday Afternoon, May 10
1:30

- 6. The Iowa County Hospital and Surgery in the Country—
Dr. J. FREDERICK CLARKE, Fairfield
- 7. Some Diseases of the Colon and Rectum too often Over-
looked—
Dr. C. B. HICKENLOOPER, Winterset
- 8. Oration on Surgery—
HENRY H. CLARK, McGregor
- 9. The Diagnosis of Gastric and Duodenal Ulcer—
Dr. EDWIN A. MERRITT, Council Bluffs
- 10. The Post-Operative Management of Surgical Cases—
Dr. CHARLES J. ROWAN, Iowa City
- 11. Early Recognition of Mental Feebleness—
Dr. VELURA E. POWELL, Red Oak
- 12. Syringomyelia—With Report of a Case—
Dr. FRANK A. ELY, Des Moines

Wednesday Evening, May 10
7:30

- 13. The President's Address—Dr. W. B. SMALL, Waterloo
- 14. Cardiac Pain—Dr. ALEXANDER LAMBERT, New York City

Thursday Morning, May 11
9:00

- 15. The Inter-Relation of Abdominal and Pelvic Pathology—
Dr. J. H. SCHRUP, Dubuque
- 16. Pyloric Obstruction in Infancy—
Dr. C. A. WATERBURY, Waterloo
- 17. Rupture of the Intestine due to Abdominal Trauma—
Dr. W. S. CONKLING, Des Moines
- 18. The Internal Secretory Glands—
Dr. CARL STUTSMAN, Burlington
- 19. Address of the Chairman of the Section on Surgery—The
Cancer Problem—
Dr. A. M. POND, Dubuque
- 20. Asthma—Its Causes, Varieties and Different Methods of
Treatments—
Dr. TAYLOR R. JACKSON, Albia

Thursday Afternoon, May 11
1:30

- 21. Drainage for Pyemic Conditions of the Chest—Surgical
Treatment and Prognosis—
Dr. F. EARLE BELLINGER, Council Bluffs
- 22. Rheumatism—
Dr. JOHN W. SHUMAN, Sioux City
- 23. Hematoma of the Abdominal Wall—
Dr. WAYNE M. SHIRLEY, Carroll
- 24. Conservation in Gynecology—
Dr. H. A. MINASSIAN, Des Moines
- 25. Oration on Medicine—
Dr. E. T. EGERLY, Ottumwa
- 26. A Study of the Sacro-Iliac Articulation—
Dr. J. N. WARREN, Sioux City

Friday Morning, May 12
9:00

- 27. Some Practical Points in the Treatment of Children's Dis-
eases—
Dr. F. G. MURRAY, Cedar Rapids
- 28. Address on Surgery—The Alimentary Drainage Scheme in
Man—
Dr. J. RILUS EASTMAN, Indianapolis
- 29. Para-Typhoid Fever—Dr. CAMPBELL P. HOWARD, Iowa City
- 30. Tumors of the Hypophysis Cerebri—
Dr. C. E. RUTH, Des Moines
- 31. Certain Types of Appendicitis—Dr. D. W. WARD, Oelwein

SECTION ON OPHTHALMOLOGY, OTOTOLOGY
AND RHINO-LARYNGOLOGY

Thursday Morning May 11
9:00

- 1. The Chairman's Address—Signs of the Times—
Dr. L. L. HENNINGER, Council Bluffs
- 2. Infections of the Lachrymal Sac and their Treatment—
Dr. C. P. COOK, Des Moines
- 3. Conservation of Vision—
Dr. T. U. McMANUS, Waterloo

- 4. Practical Points on Refraction—
Dr. F. W. DEAN, Council Bluffs
- 5. Observations on the Cause and Treatment of Accommodative
Weakness with Illustrative Cases—
Dr. F. E. FRANCHERE, Sioux City
- 6. Metallic Injury of the Eye with Report of Case—
Dr. JAY G. ROBERTS, Oskaloosa
- 7. Bony Invasion of the Choroid—
Dr. F. E. V. SHORE, Des Moines
- 8. Occlusion of the Naso-Pharynx—
Dr. F. W. BAILEY, Cedar Rapids
- 9. Standardization of Preparation of Patient, Operation and
Post-Operative Treatment for Lessening Sepsis and Shock in
Tonsillectomy—
Dr. H. G. LANGWORTHY, Dubuque
- 10. Tonsil Infections I Have Met—Dr. F. L. LOVE, Iowa City
- 11. Report of an Interesting Throat Case Complicated by
Mastoiditis—
Dr. C. F. HOWLAND, Des Moines

HOUSE OF DELEGATES

Meeting Place—The Ballroom, Hotel Blackhawk.
Wednesday Afternoon, May 10

4:30

- Roll Call
- Report of Secretary
- Report of Treasurer
- Report of Council
- Report of Trustees
- Report of Standing Committees
- Memorials and Communications
- New Business
- Election of Committee on Nominations

Thursday Morning, May 11
8:00

- Roll Call
- Reading of Minutes
- Report of Committees
- Unfinished Business
- New Business

Friday Morning, May 12
8:00

- Roll Call
- Reading of Minutes
- Report of Committee on Nominations
- Election
- Report of Committees
- Unfinished Business
- New Business

ENTERTAINMENT
Wednesday, May 10

Reception for the Visiting Ladies at the Residence of Mrs.
William L. Allen, 11 Oak Lane. Four to six.

Thursday, May 11
11 a. m.

Organ Recital and Moving Picture at the Garden. Courtesy of
The Garden Theatre.

5 p. m.

Boat Ride and Supper on the Mississippi by the Scott County
Medical Society.

HOTELS OF DAVENPORT

Hotel Blackhawk, headquarters, four blocks from
Rock Island station, two blocks from the Burlington
and Milwaukee station, and one block from the
Burtis Opera House, 225 rooms all with bath, rates
\$1.50 and upward.

Davenport Hotel, one block from the Rock Island station, five blocks from the Burlington and Milwaukee station, two blocks from the Burtis Opera House, 150 rooms \$1.00 and upward. With and without bath.

Kimball Hotel, adjoining the Burtis Opera House, \$.75 and upward. With and without bath.

Dempsey Hotel, short half block from the Rock Island station, two blocks from the Burtis Opera House, \$1.00 and upward. With and without bath.

St. James Hotel, river front, four blocks from the Rock Island station, five blocks from the Burtis Opera House, \$.75 and upward. With and without bath.

It is seen that all of the hotels are within very easily walking distance of the Burtis Opera House.

All hotels are European plan. Reservations are being made.

It may be worth while to state that at Davenport the Mississippi river deviates from its usual course and runs west; facing the river one is looking south.

State Society Iowa Medical Women

Nineteenth Annual Session, Davenport, May 9, 1916.

Headquarters, Hotel Blackhawk

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1915-16

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Dr. Mildred Sheetz.....Iowa City

ARRANGEMENTS

Dr. Jennie McCowen.....Davenport

Dr. Mary Coveny.....Clinton

Dr. Laura Branson.....Iowa City

CHILD WELFARE

Dr. Kate Harpel.....Boone

PROGRAM

Tuesday Morning, May 9

9:00

Business Meeting

Reports of Officers, Committees, etc.

SCIENTIFIC PROGRAM

Nephritis—DR. GRACE SCHERMERHORN, Clinton

Occipito Posterior Positions—DR. KATE MASON, HOGLE, Mt. Vernon

Autogenous Vaccines—DR. JESSIE B. HUDSON, Clinton

Anæsthesia—DR. MYRTA M. KNOWLES, Hampton

Infantile Paralysis—DR. MARY COVENY, Clinton

2:00 p. m.

Address of Welcome

Response

Life Insurance Examinations—DR. JENNIE GHRIST, Ames

The President's Address—DR. LILLIE KINNIER, Dubuque

Salpingitis—Surgical Treatment and its Results—

DR. ROSINA WISTEIN, Cedar Rapids

The Nervous System—DR. LENA BEACH, Carroll

The use of the X-ray in the Treatment of Disease with Demon-

stration of Radiograms—DR. MARY A. KILLEEN, Dubuque

Election of Officers

EXHIBITS

It has always been customary at medical gatherings to encourage the finding of space for exhibitors, not the old time exhibitors who brought with them quantities of sure-cure medicine, but exhibitors who bring us exhibitions of what science and skill has been able to furnish for the greater comfort and service of the practitioner. Of late years the Committee of Arrangements have censored the exhibits, and none are allowed that are not ethical and useful in their nature.

The commercial exhibit will be located in the Moose Hall, the entrance of which is but a few feet from the Burtis Opera House.

The registration bureau will also be in the Moose Hall, and members and guests are urged to register early.

Among the exhibitors, we mention the following:

Goodwin Corset Shoppe, Putnam Building, Davenport, will demonstrate their methods of fitting corsets by correct anatomical, physiological and scientific measurements. They will explain how to judge the efficiency of an appliance for surgical support, with special reference to the adjustment of corsets for maternity cases, abdominal ptoses, and post-operative retention. This exhibit will be unusually instructive, and well worth the attention of all visitors to the convention.

Horlick's Malted Milk Company, Racine, Wisconsin, will display "Horlick's" the Original Malted Milk, Horlick's Food and Horlick's Diastoid. They will also serve Horlick's Malted Milk Ice Cream, and all are cordially invited to inspect the exhibit.

Sharp & Smith, 155-157 N. Michigan Blvd., Chicago, Ill., will exhibit a large and complete line of surgical instruments and supplies, a large number of new and recent instruments, and this enterprising house, so long known by the profession, cordially invite physicians to study their exhibit

The well known medical book publishers of St. Louis, Missouri, the C. V. Mosby Company, will exhibit the following new books:

Crossen—The Diagnosis and Treatment of Diseases of Women. (Third edition.)

Crossen—Operative Gynecology.

Sutton—Diseases of the Skin.

Preston—Fractures and Dislocations.

Calot—Indispensable Orthopædics.

They will also have a complete line of text-books and medical monographs. Their exhibit will be in charge of Dr. W. C. Tanner of Des Moines, Iowa. Dr. Tanner is well and favorably known among the physicians of Iowa.

Dr. H. M. Alexander & Company, Marietta, Pa., will exhibit Biological Products manufactured by them. They will show in particular the method of production, and explain in detail the method of distribution of these products to the people of Iowa in co-operation with the Iowa State Board of Health, at greatly reduced prices.

The Standard Oil Company (Indiana) will introduce their new Stanolind Liquid Paraffin. This product was put on the market about a year ago, under the trade name "Stanolax Liquid Paraffin" and has had a wide sale. After a very complete distribution had been arranged, the Standard Oil Company discovered that, while the oil was acceptable, the name and the package did not conform to the rules for such products laid down by the Council on Chemistry and Pharmacy of the A. M. A. They took immediate steps to change the package and the name to meet the requirements of the Council, and now have everything ready to withdraw the old brand in favor of the more ethical.

G. D. Searle & Company, 215-219 West Ohio St., Chicago, Ill., now claims to have one of the most complete laboratories for the manufacture of fine pharmaceutical products that there is in the United States, and they consider it a pleasure to welcome the profession and have the opportunity of showing what is done in the manufacture of their preparations. The next time that you happen to be in Chicago, make a point to visit these laboratories and see for yourself the quality of goods that is turned out by this firm.

The Lungmotor will be exhibited by the Life Saving Devices, Inc., 180 N. Market St., Chicago, Ill. This is for use in asphyxia of all forms, apparent drowning, electric shock, etc. It is being purchased exclusively by the United States Government as well as the largest corporations, many hospitals, physicians and municipalities of Iowa and other states.

Borden's Condensed Milk Company, 108 Hudson St., New York City, will tell us "How the Award was Made" at the Panama Exposition—how they (the judges) analyzed and tested and compared and went over the work carefully with the result,—invariable when honest experts have the decision in their hands,—that merit won and to Borden's Malted Milk in the Square Package, was awarded the grand prize, the highest award in their power to bestow.

The R. & E. Mfg. Company, 1195 East 124th St., Cleveland, Ohio, will demonstrate the Dr. Beachler Sphygmomanometer. They have a simple, thoroughly reliable, and practical little Blood Pressure Instrument, and it sells at the low price of \$10.00. It is the best little instrument on the market, and is equally satisfactory for Systolic, Diastolic and Pulse Pressure. It will appeal to everyone wishing a reliable and accurate instrument.

Reed & Carnrick, 42 Germania Av., Jersey City, N. J., will present an exhibit of purely scientific nature, showing the different stages in the manufacture of their various physiological and glandular products. The glands exhibited in their various states of preparation are in part the pancreatic, peptic, intestinal, thyroid, thymus, renal, splenic and salivary glands. Each gland is shown separately beginning with the maceration down to the final stages where they enter into the formation of the particular products desired, peptenzyme, protonuclein in all forms, trophonine, nephritin, pancrobilin, zymocide, analeptine, roboline, soluble food and lacto preparata.

The Wm. Meyer Company, 825 W. Washington Blvd., Chicago, Ill., manufacturers of X-ray apparatus, will have one of their latest types of interrupterless machines and accessories, also some of the work done with same. These machines embody a number of desirable features for doing precise work eliminating all guess work and making the taking of brilliant radiographs a certainty. Those who may

be interested will be welcome to investigate to the fullest extent.

Messrs. Hynson, Westcott and Company, Charles & Franklin Sts., Baltimore, Md., will exhibit their scientific pharmaceutical products and unique convenient diagnostic agents and appliances. They were the first to produce and present to American physicians a medicinal product of corpus luteum, their Lutein Tablets, which have been used under close observation, first by Drs. Howard A. Kelly and Curtis F. Burnam, and later by a number of prominent clinicians, reports from whom have been most satisfactory. They were also the first to market phenolsulphonephthalein in a form that can be satisfactorily used as a kidney functional test.

The members of the Iowa State Medical Society are invited to call at booth 14 and have the workers of the National Pathological Laboratory, 5 South Wabash Ave., Chicago, explain how the vaccines and Wassermann's are made in their laboratory. Containers for specimens will be given to physicians.

The Cathode Shield used by the Macalaster-Wiggin Company, 154 West Lake St., Chicago, Ill., on their standard X-ray tubes for transformers has proved itself of great value in giving protection to the cathode neck of the X-ray tube. It protects the neck from being punctured no matter how great the milliamperage current put through the tube. No first-class tube for transformer is complete without their cathode shield.

Those interested in X-ray work in any way will be pleased to know that Mr. Geo. W. Brady, 754 S. Western Ave., Chicago, will be at the convention of the Iowa State Medical Society to be held in Davenport in May. Mr. Brady's efficient and intimate knowledge of the most intricate and interesting phases of the X-ray work is well known, and roentgenologists always find much profit in spending whatever time they can in discussing X-ray technique with him.

The John McIntosh Company, 30 E. Randolph St., Chicago, Ill., are now territorial representatives of the Victor Electric Company in the State of Iowa. They have secured a large space for the state meeting and will, at that meeting, display a complete line of X-ray and high frequency apparatus. The John McIntosh Company is well known to all who are in any way interested in electro-medical apparatus. The Victor Electric Company has the reputation of producing apparatus for the physician and surgeon that is electrically and mechanically correct. We believe that every one who attends the state meeting will not find his time wasted by spending a portion of it in the exhibit of the John McIntosh Company and learning something of the modern developments in the line of X-ray, high frequency and electro-medical apparatus in general.

The Weder Manufacturing Company, Philadelphia, are going to demonstrate their most useful article, De Lyte Surgeon, electric diagnostic case, which has its advantages, in being able to carry it in the vest pocket; together with the valued use of being able to examine the eye, ear, nose, throat, rectum, vagina, or any place where a light is desired. Don't fail to see the same, as the price is only \$6.00, and can not be duplicated for many times that amount.

The Standard Chemical Company of Des Moines will exhibit a fine line of pharmaceuticals, surgical instruments and physicians supplies. This Iowa company has lately enlarged and improved its plant until it has one of the best equipped pharmaceutical plants in the Middle West. Special attention is given to the manufacture of physicians private formulae.

It will be seen from the foregoing that the exhibits presented at this meeting of the State Society, are well worth careful study and consideration. The things exhibited are scientific, of high character, and of great helpfulness to the modern physician, and well worthy of careful consideration. The committee, recognizing the importance of these exhibits, has made a special effort to secure an abundance of room and light, and the exhibitors themselves, promised to place in charge, men specially trained in the work of scientific helpfulness to the physician.

DAVENPORT—OUR 1916 MEETING PLACE

Davenport is a city of 55,000 people—a city of tall buildings, factories, and stores, but essentially a city of homes.

When you visit us in May you will first of all notice how compactly our various meeting places are situated. The Blackhawk, our headquarters, is a beautiful, new, fireproof hotel. Splendidly furnished, running ice water in every room, private bath in every room, a magnificent ballroom, and most attractive and well conducted dining rooms. In fact it was the completion of the Blackhawk that emboldened us to ask you to "Report in Davenport." While the Blackhawk is the pride of Davenport we have other very attractive and very good hotels. The Kimball adjoins and connects with the exhibition hall, in the Davenport you will find a Rotisserie Cafe and you really must not leave Davenport without visiting this cafe, the only one of its kind in Iowa. In the St. James you will find a beautiful new dining room looking out over the Mississippi, and those who visit Dempsey's are forevermore his friends. Just half a block from the Blackhawk is the exhibit hall—one exhibitor alone will show \$6,000.00 worth of his merchandise—and we have seventeen exhibitors at this date. Less than fifty feet from the exhibit hall is the entrance to the Burtis Opera House where the general scientific meetings will be held. The eye and ear section will meet in the Blackhawk ballroom as will also the House of Delegates. It is hoped that the beautiful surroundings will have a desirable effect on both bodies.

Among points of interest to the members of the

Iowa State Medical Society is our school system. The city superintendent cordially invites you to visit the schools. We have possibly the finest high school in Iowa, a new industrial arts building, and were the first city in Iowa to install medical supervision of schools—or medical inspection, as it is sometimes called.

Davenport was one of the first cities in the west to install a free dental clinic in the public schools. Visitors may see the school physician, the school nurse, and the school dentist at work, may visit the class rooms, or the industrial arts building.

A ride over the hills of the city takes one through the residential section. Less than three miles up the river from the Blackhawk are the great Bettendorf shops. The town of Bettendorf adjoins Davenport on the east. One mile further up lies Davis Gardens—where, under miles of glass and steel, you may see one of the largest cucumber and flower plants in the world.

Just a few blocks from our headquarters you will find a huge wheel factory. No one knows just how many iron wheels they make a day, as the output is constantly increasing. Davenport also happens to make a large share of the washing machines of America. One of our largest industries has somewhat declined since January 1, 1916.

The great Rock Island Arsenal lies at our door, on an island in the Mississippi. Arsenal Island is a mile wide and three miles long. This island with its

beautiful drivers may be visited by our guests by driving over the Government bridge—or they may continue over the Island, cross a second bridge, and visit the city of Rock Island. One may cross the river Rock Island by ferry also. Continuous with Rock



Hotel Blackhawk—Headquarters

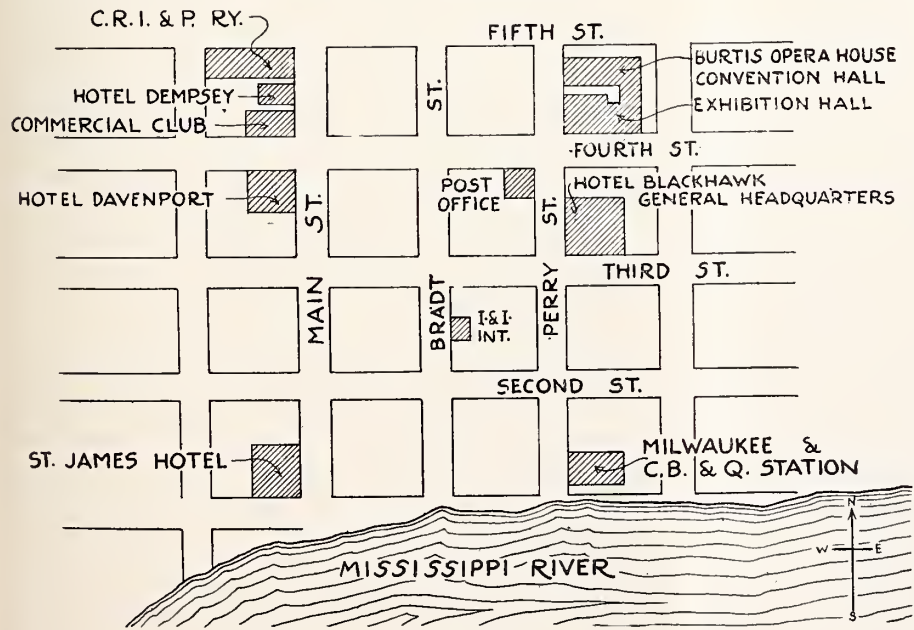
Island lies Moline—the home of the John Deere and many other great factories—and of some of the finest residences in the West. Davenport is a most progressive city—a few weeks ago we gathered a Boy Scout fund of \$8,000.00—this week the city is gathering up \$50,000.00 for land and buildings for Battery B. We believe in Scouts and Soldiers—

and some other things. So next week begins a whirl wind campaign to raise \$125,000.00 more than we have on hand to build a new fire-proof, modern St. Luke's Hospital. And just as soon as that is finished we will secure a home for the Lend-A-Hand-Club—and after that, if there is any chance, we will will build a permanent home for the Woman's Club.

When you visit us in May we are first of all going to make you feel welcome.

The Scott County Medical Society
By the Entertainment Committee.

March 28, 1916.



Guide to Headquarters, Meeting Places, etc., Davenport

The Journal of the Iowa State Medical Society

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Vol. VI April 15, 1916 No. 4

THE DAVENPORT MEETING OF THE IOWA STATE MEDICAL SOCIETY

The Davenport meeting of the Iowa State Medical Society should be one of the most interesting held in recent years. The location of Davenport on the Mississippi River; the beautiful surroundings furnished by Nature, and aided by the helpful hands of enterprising citizens, has made Davenport the most beautiful of all the river towns. Davenport has passed the stage of home making, and is well advanced on the way to home and city beautifying, and with the season of the year, all conspire to make the few days visit in Davenport a most pleasant vacation.

We are not informed of any business matter of vital importance, and it may be trusted that the meeting will be one of pleasure and scientific interest.

The Committee of Arrangements will no doubt provide liberally for reasonable entertainment of the members and ladies, but we have a feeling that if the Committee undertake too many formal things, or if the citizens are too lavish in their hospitalities, that it will give an unpleasant feeling of burdensomeness. The gentlemen who attend the meetings of the State Society have got quite familiar with methods of taking care of themselves, and if a few entertaining things are put in their way, they will be able to utilize them in a pleasant and agreeable manner.

FIRST AID SERVICE

In the surgical service of railways and other corporations, a considerable degree of interest has developed in relation to first aid. This is not

altogether new, for efforts were made in the way of developing an interest in first aid almost from the first organization of the American Association of Railway Surgeons. These efforts were more or less spasmodic, but scarcely a year passed without some discussion coming up on the question of first aid service to injured railway employees. The railway corporations themselves seemed to feel but little interest in the matter, and the services rendered by the American Association of Railway Surgeons were mainly in the direction of preparing the minds of those having charge of large numbers of men, to consider seriously some better way of dealing with men who are unfortunate enough to be injured. The economic value of human life, and early return to active service, was but little understood, but here and there a feeling seemed to grow that there was a better way of dealing with injured men, not only from a humanitarian point of view, but also from an economic point of view.

The humanitarian spirit which naturally belongs to the human race, led men to feel that something should be done to lessen the frequency of accidents in industrial service, which was becoming appalling. The enormous number of men killed and injured could not always pass unnoticed, and the first genuine movement on the part of industrial corporations was to inaugurate and compel "Safety-First" with a view of materially lessening the number of accidents. This was not so easy to carry out as might at first seem. Many men in subordinate positions were not able to comprehend the problem, and the good work of men higher up sometimes fell without results, but by persistent efforts and discipline, a marked improvement could be seen, which fixed the question of safety-first firmly in the minds of all classes of industrial workers, and in the minds of the general public. It could not be hoped that even the most perfect application of the principles of safety-first could prevent accidents entirely, and that there must be a large number of persons that would suffer injury in spite of all safety-first plans.

The question of first aid which had been so much discussed by the National Association of Railway Surgeons, was revived, and now that the industrial corporations had begun to appreciate what could be done by safety-first, very willingly lent their ear to first aid plans which would very materially supplement safety-first, and now men in all ranks in the profession, managers of corporations, and the people, have finally discovered that the general plan of taking care of persons injured in the industries, persons injured in the police force, persons injured on highways and on

the streets, could be provided with better service, and thereby lessen the number of deaths and the number of arms and legs sacrificed, and other more or less permanent disabilities. It furthermore began to be appreciated that to accomplish any real, useful purpose, that a combined and co-operative effort should be made in this direction, and to further this, various surgical bodies have held conferences through the appointment of delegates, to consider some well defined plan which could develop and standardize first aid to the extent of making it of general application throughout the country.

The first-aid propaganda seems so easy that but little effort would be necessary to bring it into active operation everywhere, but the constitutional indifference of the American people, make these apparently easy things, difficult of accomplishment. If a man is injured on the street, half a dozen irresponsible people will telephone for half a dozen different kinds of doctors, and the man will be allowed to lie in his exposed situation until some doctor gets there and tells the people what to do. In towns where there is well organized ambulance service, this does not generally happen. The injured person is immediately sent to the hospital, and the hospital authorities summon a doctor. So many people do not realize that the injured person should be taken to a hospital or other place where services can be rendered, but that the doctor must be brought to the patient instead of the patient being taken to the doctor.

To show the indifference generally manifested in relation to first aid, not long ago the Red Cross Society sent a first aid instructor to an important railway division center, to give demonstrations of first aid, but only when the demonstrations were made in the shops, did men attend. When the lectures were to be given in the car, they were but poorly attended, and when a public demonstration was to be given, only a small number turned out. So again it will be seen that the difficulty of developing an interest in this very important subject requires persistent effort upon the part of those who undertake this work, and in this connection we are publishing a letter written by Dr. Joseph M. Craighill, Chief Surgeon of the Baltimore Police Force, to the Secretary of the American First-Aid Conference, and also a communication by Dr. Joseph C. Bloodgood, Secretary of the American First-Aid Conference.

FIRST AID INSTRUCTION TO POLICE FORCE OF BALTIMORE CITY

By Joseph M. Craighill, M. D., Chief Surgeon
[Letter to Secretary of the American First-Aid Conference]

My Dear Doctor—In reply to your letter as to what has been done relative to first-aid to injured by the police department of this city, I enclose the report of Lieutenant George E. Lurz, who has been a most efficient teacher and takes great interest in his work.

In the latter part of 1913, or early 1914, I was ordered by the police board to look into establishing first-aid instructions to the police force as far as practicable.

After investigating the Pennsylvania railroad mode of instructions and writing to Major Patterson of the Red Cross organization, I obtained a number of first-aid books gotten up by that society and distributed them in the department, where I thought they would be useful in disseminating the knowledge I wished to impart.

It was hard for me to decide just how much instruction these men should receive, also how to get them informed about first-aid subjects without making them think they had missed their calling by not being medical men.

Another difficulty about said instructions was that it takes the policeman away from his beat more than he could well be spared in a city where we need at least 100 to 200 more men than are on the roll at the present time. The present available force is about 700 men, with an average of from 25 to 50 men constantly on the sick report due to sickness and injury.

My first efforts of instruction were to give a few talks to the captains of the department and to distribute a first-aid book to each one. Later, I came to the conclusion that I had started at the wrong end of the line; the probationer policeman was the man to teach and gradually work on up the line towards the captains.

With this idea in mind, it was thought best to have this subject taught at the regular school of instructions of this department, located at the Northern Police Station. These young men are there put through a regular course of training until they are proficient enough to graduate, and the first-aid course as installed in this curriculum. Lieutenant Lurz, assisted by the instructor in the gymnasium, Officer Lynch, doing the teaching. These two officers were personally instructed by me, making a study also of the various first-aid books and attending lectures when they could on this subject.

Lieutenant Lurz had been a teacher before he became a policeman, so his help has been very effectual. His instructions have been along the lines of simplicity to enable the policemen to aid the sufferer until he could be gotten into a nearby hospital; also how to do artificial respiration in gas poisoning; how to handle a man who had been overboard, etc. These men have also been instructed as to what not to do, which I think is nearly as important as the

reverse. They are taught how to handle a wounded man by actual demonstration, how to get him to the ambulance, how to apply temporary splints, etc.

After starting the instructions to the men, the next problem to solve was, how the policeman could get a first-aid package when needed. Already a very much encumbered man, with his pistol, handcuffs and other things he is required to carry, I did not think it advisable to add a first-aid package to his equipment. Noting a space in the lower part of each patrol box, I concluded if the first-aid package could be made of a proper shape, a package in each box, it would be available not only for the use of the officer or for any passing doctor who might be trying to help out in an accident case on the street. With this idea in view, I wrote Major Patterson on the subject. He came to Baltimore and thought well of my suggestion and made a package for the department of the proper size and shape. This package, it is needless to say, has been useful on many occasions, but this system might be improved on by possibly having a special box provided attached to the patrol box. The package contains a bandage, which the men are instructed how to open up without touching the pad which is to go next to the wound; also a triangular bandage, which can be used for all kinds of temporary uses, and two safety pins. Owing to the fact that the police patrol wagon is the only public ambulance service in the city, it was thought advisable to place some first-aid packages, bandages, etc., in each wagon; also an outer splint, to extend from the axilla down the outer side of the body, and a shorter inner splint. I also had made for each wagon five leather straps, three shorter ones for the leg and two longer ones for the trunk. As you will see, the patrol wagon men, 51 in all, have been instructed how to use these appliances on injured people in getting them into a hospital.

Soon after starting our first-aid work the Red Cross Society sent an instructor in swimming to this city, who gave lessons not only in swimming, but how to rescue and resuscitate the drowning man. All policemen around waterfronts were given instructions by him.

This gentleman also prevailed on the police department to place, on the different piers about the city, life lines with a cork buoy big enough to hold a man up in the water. I am informed quite a number of lives have been saved by the aid of these buoys.

To sum up to the present time, 348 men have been instructed. All those coming on the force are sent to the school of instruction, and gradually all others of the younger men will in time be sent to the school of first-aid.

AMERICAN FIRST-AID CONFERENCE

Dr. Joseph C. Bloodgood, Secretary, 904 N. Charles Street

Baltimore, Md., December 29, 1915.

At the request of the American First-Aid Conference, President Wilson has appointed a National Board of First-Aid Standardization to deliberate

carefully on first-aid methods, packages and equipment, and instruction, and to recommend a standard for each to a subsequent session of the conference. The personnel of the board is as follows:

Dr. Richard H. Harte, chairman; representing the American Surgical Association, 1503 Spruce street, Philadelphia, Pa.

Assistant Surgeon-General W. C. Rucker, secretary; representing the Public Health Service, Washington, D. C.

Dr. J. Shelton Horsley, representing the American Medical Association, Richmond, Va.

Dr. John P. Kaster, representing the Association of Railroad Chief Surgeons; chief surgeon, Atchison, Topeka & Santa Fe Railroad, Topeka, Kans.

Dr. S. C. Plummer, representing the American Association of Railroad Surgeons; chief surgeon, Chicago, Rock Island & Pacific Railway, Chicago, Ill.

Major Robert U. Patterson, representing the United States Army Medical Corps and the American Red Cross; Department of First-Aid, Red Cross, Washington, D. C.

Col. Louis A. La Garde, U. S. A., retired; representing the War Department, Washington, D. C.

Surgeon A. M. Fauntleroy, representing the Navy Department, Washington, D. C.

To attain the objects of this movement it is essential that the board should consult the best opinion of the country on the problems involved and should enlist the sympathy and active co-operation of the medical societies. To this end a questionnaire on first-aid has been sent out to the surgeons of railroads, mines, factories and physicians in industrial practice. A large number of replies have already been received. The principal National and State Medical Societies have been invited to appoint special first-aid committees of three members each to co-operate with the Board of Standardization. The following are among those committees already appointed:

The American Surgical Association—Dr. Edward Martin of Philadelphia, Pa.; Dr. Emmet Rixford of San Francisco, Cal.; Dr. John Bapst Blake of Boston, Mass.

The American Medical Association (Surgical Section)—Dr. F. B. Lund of Boston, Mass.; Dr. J. F. Mitchell of Washington, D. C.; Dr. J. M. Wainwright of Scranton, Pa.

The Southern States Association of Railroad Surgeons—Dr. Southgate Leigh of Norfolk, Va.; Dr. Bacon Saunders of Fort Worth, Tex.; Dr. Ambrose McCoy of Jackson, Tenn.

Conference of Physicians in Industrial Practice—Dr. John J. Moorhead, New York city; Dr. W. Irving Clark, Worcester, Mass.; Magnus W. Alexander, West Lynn, Mass.

Medical Society of the District of Columbia—Dr. Charles S. White, Washington, D. C.; Dr. William P. Reeves, Washington, D. C.; Dr. H. H. Kerr, Washington, D. C.

Utah State Medical Association—Dr. R. S. Joyce, Ogden, Utah; Dr. J. F. Critchlow, Salt Lake, Utah; Dr. J. W. Aird, Provo, Utah.

SAFETY BULLETIN NO. 24

Safety First, which stands for:
Conservation of human life and safety men as well as things:
In five and one-half years on the North Western has brought about the reduction in accidents to employees shown in the following statement:

| | Killed | Injured |
|---|--------|---------|
| 1909 (Before the Safety Organization was started) | 99 | 7904 |
| 1910 | 97 | 8404 |
| 1911 | 76 | 6025 |
| 1912 | 73 | 6043 |
| 1913 | 67 | 6395 |
| 1914 | 49 | 5520 |
| 1915 | 34 | 5221 |

8423. R. C. RICHARDS,
Mileage, January 1, 1909, 7953; January 1, 1916, Chr., Central Safety Com.
No passenger killed in a train accident during the three years ending December 31, 1915.

NATIONAL BOARD OF MEDICAL EXAMINERS

The profession has for many years recognized the difficulties and embarrassment that comes from a registered practitioner moving from one state to another. Nearly all the states have a board of medical examiners authorized to grant certificates allowing a physician to practice in a particular state. The character of the examination varies to a greater or less extent with different boards, and while it may not be a hardship for the graduates just out of medical school to pass these examinations, in a few years it is found that the best qualified are unable to answer many questions that the Board of Examiners propound, and the changing of residence from one state to another, for the purpose of practicing medicine, is attended with very serious inconvenience, and is sometimes rendered impossible.

To meet the objections to the plan which has heretofore prevailed, it has been proposed that a National Examining Board should be authorized to examine graduates of medicine, and issue licenses which would permit them to register in any state of the Union under certain conditions that would protect the welfare of the state that a practicing physician may desire to emigrate to.

Dr. W. L. Rodman as president of the A. M. A., set this plan in operation in a preliminary way by nominating an examining board of fifteen members whose professional standing should be a guarantee of its ability and fairness. This National Board of Medical Examiners held its meeting for organization at Washington, November 29th, every member being present.

The following is the personnel of the National Board as at present constituted.

Admiral Wm. C. Braisted, Surgeon-General United States Navy, president; Major-General Wm. C. Gorgas, Surgeon-General United States Army; General Rupert Blue, Surgeon-General United States Public Health Service; Colonel Louis A. LaGarde, United States Army, treasurer; Assistant Surgeon-General W. C. Rucker, United States Public Health Service; Commander E. R. Stitt, United States Navy; Dr. Herbert Harlan, representing the Confederation of State Boards of Examiners; Dr. Isadore Dyer, representing the Association of American Medical Colleges; Dr. E. Wyllys Andrews, representing the American College of Surgeons; Dr. Louis B. Wilson, representing the Mayo Foundation; Dr. Victor C. Vaughan, representing the American Medical Association; Dr. Henry Sewall, representing the Association of American Physicians; Dr. W. L. Rodman, secretary, representing the American Medical Association; Dr. Austin Flint, Jr.; Dr. Horace D. Arnold.

THE ANNUAL CONGRESS ON MEDICAL EDUCATION, PUBLIC HEALTH AND MEDICAL LICENSURE

The annual Congress on Medical Education, Public Health, and Medical Licensure, met at Congress Hotel, Chicago, Feb. 7 and 8, 1916. The first session was devoted to a symposium on the "Relation of Laboratory Courses to the Work of Clinical Years" in medical schools. The session most interesting to the general profession was devoted to the consideration of the relation of National Board of Medical Examiners to the Confederation of State Medical Boards of the United States.

We have called attention to the efforts made by Dr. W. L. Rodman to secure a National Board, and particularly to the recommendations made in his address as President of the American Medical Association, and the reference of the recommendations to the House of Delegates. The house of Delegates in turn referred the matter to the Council on Medical Education, Public Health and Medical Licensure, and through the Council an independent voluntary board was formed, which had a provisional meeting in Washington, and organized and appointed a time for the first official meeting.

In accordance with this independent plan, originating with Dr. Rodman, a symposium on "The National Board of Medical Examiners" was participated in by Surgeon-General W. C. Gorgas, United States Army; Surgeon-General W. C.

Braisted, United States Navy, and Surgeon-General Rupert Blue, United States Public Health Service; Dr. Herbert Harlan, President of the Maryland State Board of Medical Licensing Boards; Dr. Victor C. Vaughn, Dean of the University of Michigan Medical School, and Dr. Isadore Dyer, Dean of the Tulane University of Louisiana School of Medicine, New Orleans. At the end of this symposium, the Secretary of the State Medical Board of Illinois presented a paper in opposition to this plan on the ground of it being an illegal encroachment upon the rights of states to determine all questions in relation to the practice of medicine within their own boundaries. All the other addresses were in support of a national examining board and to the effect of endorsing the plan in that it established a standard of requirements, which should be general throughout the United States, and of sufficiently high order to meet the requirements of the military service in case of necessary enlargement of the army medical corps if war should occur. It was held that the state examining boards differed materially in their requirements, and had not yet established any uniform qualification for licensures.

The discussion which followed the reading of the symposium was exhaustive, and covered a rather wide field, in which, in many instances, the real issues were lost sight of. The advocates of the National Board were not in favor of superceding or in any way impairing the influence of the state boards, holding that the state boards should perform the functions they had heretofore performed, and only asked that the state boards recognize the examinations of the National Board in such a way as to permit one holding a certificate from the National Board, to practice in any state which he felt it to his convenience to locate. The opponents of the National Board brought forth in their arguments the ordinary pleas held in support of state rights, the question of legality, and the question of the power of the National Board to enforce any of its rules or regulations, and held strictly to the idea that the plans now enforced, while not perfect in themselves, should not be seriously interfered with, and that there was no occasion for a National Board, and it would be unwise and undesirable for the Federation of State Boards to recognize in any way the examinations of the National Board.

The members of the Council of Medical Education, Public Health and Medical Licensure and, as it seemed to us, the majority of men holding liberal views, held to the effect that the National Board could accomplish a great service in the

way of standardizing medical examinations and establish throughout the United States a corps of men who had passed examinations which would fit them to service without question in the army in case of necessity, and that the fear of establishing an aristocracy or exclusive class of practitioners, who had passed a higher board, was without foundation. It seemed to be the consensus of opinion among the most liberal minded, that the National Board, while it was founded and supported as a private undertaking, would continue to exist and serve the purpose which its founders intended it should serve, that it would have the same relation to medical examinations that the Association of Medical Colleges does to colleges, or that the Council on Medical Education sustains to the cause of medical education throughout the United States. It was pointed out that the Council on Medical Education was an entirely voluntary organization without any legal status or legal rights, yet through its influence had accomplished a great change in the standards of medical colleges, and that the only thing that could be asked of the state boards would be the acceptance of the certificates of examination of the National Board as a sufficient examination for the practice of medicine in any state in which the candidate desired to locate; that there could be no possible legal objection to state boards recognizing the National Board.

The opposition to a National Board of Medical Examiners, seems to emanate principally from the various state boards of examiners. We feel quite certain that the profession as a body will approve the organization of a board which issues certificates that may be registered in any state in the Union. It is not probable that for many years any considerable number of graduates would take the National Board examinations, but it would grow in time because of its economic value. The names of the members of the Board as given above, would be an abundant guarantee of the capability of the Board, and its inherent fairness. If the state boards put themselves seriously in opposition to such a plan, they subject themselves to the criticism of being influenced by selfish motives.

Another subject of much interest was the paper on "The Regulation of Drugless Practitioners." No discussion followed this paper which had for its purpose the classifying of practitioners that treat the sick without drugs, and those who practice medicine by the use of drugs and by surgical procedure.

Another paper at this session was on the "Standardization of Hospitals" by Dr. John M. Baldy, President of the Pennsylvania Bureau of

Medical Education and Licensure, Philadelphia. We need make no comments on this paper, as Dr. Baldy presented in still more emphatic language what we have very frequently said in this periodical from time to time on the shortcomings of hospitals.

There is one feature of the law in Pennsylvania that is extremely helpful to raising the standards of hospitals, and that is that the law permits the board to designate what hospitals may receive state aid, and what hospitals may not, and in Pennsylvania numerous instances have occurred where state aid was withheld on account of low standards of work. It is to be presumed that the time is not far distant when the hospitals that have been refused state aid, will improve the quality of their work.

A voluntary contribution was made by Ex-Governor Hodges of Kansas, on "State Medical Legislation." This paper had so much merit in it that a resolution was adopted, ordering the printing of a large number of reprints for distribution. The medical profession might well do as our Puritan fathers did, set aside a day for prayer and thanksgiving that there is at least one layman in high political life that is able to see the rightness of things and who has a mind open to real public welfare. We cannot go into the merits of this paper, but propose at an early date to publish this paper in full.

Taking this conference all in all, it is very gratifying to observe with what willingness members of the medical profession come from all quarters of the land to discuss matters of general welfare interest. It shows every year how devoted a considerable body of the medical profession is to the real health interests of the nation, and these gatherings should form an important chapter in the welfare history of this country.

DR. HENRY B. FAVILL

The medical profession has suffered a distinct loss in the death of Dr. Henry B. Favill, not only the medical profession, but the great body of the public also. Dr. Favill was no more famous as a physician than he was as a worker in the cause of public good. He was a man of great ability, a man of great force of character, and of such physical ability that the amount of work he could perform was beyond the ordinary measure of human endurance. Dr. Favill represented the type of men that have the courage of their convictions, men that believe there is a distinct duty to be performed outside of that which relates to the individual himself. In a government like our own, based upon primary consideration of the in-

dividual, and dependent more or less upon individual initiative, it is found that selfishness often goes a long way in restraining public welfare ideals, and is dependent on individual right thinking and right doing to save us from the disorganizing influence of many conflicting interests, and it is to men like Dr. Favill in all callings and professions, that we have been able to restrain selfishness and to resist encroachments on public welfare. Such men are often unpopular because it is quite impossible for them to avoid more or less serious antagonism. It is well recognized that publicity is one of the strongest restraining influences of public wrong doing, and in correcting evils that cannot bear the light of public inspection. It was Dr. Favill's mission to disregard the danger of unpopularity in struggling for better conditions, and when much antagonism was aroused in selfish places, the majority influence was ultimately with him, and the respect for Dr. Favill and the confidence reposed in him by the great body of betterment workers, was second to no other man in Chicago.

DR. W. L. RODMAN

Since the meeting of the Annual Congress of Medical Education, Public Health, and Medical Licensure, February 7 and 8, 1916, another distinguished member of the profession, taking an important part in the proceedings of this Congress, has died.

Dr. W. L. Rodman whom we had the pleasure for many years to know rather intimately besides his activities as a practitioner and teacher of surgery, and an observer of unusual powers, was also a welfare worker in the profession of unusual brilliancy. Dr. Rodman as a author on surgical subjects, was favorably known, and he was distinguished especially for his work in cancer research. The distinguished abilities of Dr. Rodman, and his high ideals of medical and surgical practice, had been recognized by the profession in America conferring upon him the highest office, that of President of the American Medical Association.

One of the important medical welfare measures that he advocated for many years, was the organization of a National Board of Medical Examiners, which he brought to the attention of the profession in his address as President of the Association at San Francisco. Notwithstanding the efforts to side track Dr. Rodman's recommendations, they were referred to the Council on Medical Education, and were presented to the recent Congress at Chicago, where after a full discussion, they received the tacit endorsement of the

leading men whose views of medical licensure extended beyond the jurisdiction of their own individual states, and it may now be safely said that the views of Dr. Rodman on a National Examining Board has become the settled policy not only of the Council on Medical Education, Public Health, and Medical Licensure, but of men interested in medical education not having any official connection with medical schools or examining boards.

Dr. Rodman's days were numbered in the midst of his activities and usefulness, but he was fortunate to have lived long enough to see the views he had held for the extending of a liberal policy and a widening of professional influence, to more completely include all professional activities of whatever kind, not only private, but public activities in which the profession must of necessity serve so important a part in the future interests of our country.

Personally, Dr. Rodman stood for the high ideals of the perfect gentleman in all his relations in life. His bearing was dignified and courteous, and while he was somewhat reserved in his intercourse with men, he had always a warm and encouraging side for men in and outside the profession in all walks of life. Dr. Rodman's is a figure that will be missed in medical gatherings for many years to come.

DEATHS OF PHYSICIANS IN 1915

In The Journal of the American Medical Association for Jan. 1, appears its annual summary of deaths of physicians. During 1915 the deaths of 2,451 physicians in the United States and Canada were noted in The Journal of the American Medical Association. Reckoning on a conservative estimate of 156,000 physicians, this is equivalent to an annual death rate of 15.71 per thousand. For the thirteen previous years the death rates were as follows: 1914, 14.41; 1913, 14.64; 1912, 14.13; 1911, 15.32; 1910, 16.96; 1909, 16.26; 1908, 17.39; 1907, 16.01; 1906, 17.20; 1905, 16.36; 1904, 17.14; 1903, 13.73 and 1902, 14.74. The average annual mortality for the period from 1902 to 1915 inclusive was, therefore, 15.71 per thousand. The chief death causes in the order named were the same as for last year, namely: senility, heart disease, cerebral hemorrhage, pneumonia, accident and nephritis. The age at death varied from 21 to 102, with an average of a little over 59 years. The general average of age at death since 1904 is 59 years, 6 months and 11 days. The number of years of practice varied from 1 to 79, the average being 32 years, 4 months and 26 days. The average for the past twelve years is 32 years, 2 months and 13 days.

Causes of Death—There were 227 deaths assigned to general diseases; 276 to diseases of the nervous system; 293 to diseases of the circulatory system; 173 to diseases of the respiratory system; 115 to dis-

eases of the digestive system; 124 to diseases of the genito-urinary system; 400 to senility; 44 to suicide; 104 to accident; 21 to homicide, and 88 after surgical operation. Among the principal assigned causes of death are senility, 400; heart disease and cerebral hemorrhage, each 218; pneumonia, 154; accident, 104; nephritis, 90; malignant disease, 65; tuberculosis, 62; suicide, 44; angina pectoris, 28; septicemia, diabetes, appendicitis and arterio-sclerosis, each 22; homicide, 21; typhoid fever and gastritis, each 15; uremia, 14; meningitis and intestinal obstruction, each 12; myocarditis, 11; cholecystitis, 10; influenza and paresis, each 8; anemia and bronchitis, each 6; rheumatism, insanity, endocarditis, peritonitis and prostatitis, each 5; embolism, 4; typhus fever, dysentery, erysipelas, epilepsy, acute dilatation of the heart, gastric ulcer, hernia and cirrhosis of the liver, each 3; pellagra, leukemia, arthritis deformans, drug addiction, paralysis, paralytic dementia, mastoiditis, asthma, atrophy of the liver, ptomain poisoning and dropsy, each 2, and malaria scarlet fever, diphtheria, tetanus, alcoholism, cerebrospinal fever, locomotor ataxia, neuritis, aneurysm, pleurisy and gangrene of the lung, each 1. Two physicians died in prison, and 9 lost their lives either in battle on land or by the sinking of ships on which they were medical officers.

The causes assigned for the 104 deaths from accident were; automobile, 23; falls and drowning, each 16 (of the latter, 5 physicians were drowned in attempting to save lives); poison, 11; automobile and railway, and railway, each 10; burns, 4; firearms and by animals, each 2, and asphyxiation, sunstroke, privation, lightning and explosion, one each. The 44 physicians who ended their lives by suicide selected the following methods: firearms, 17; poison, 15; cutting instruments, 5; cause not stated, 3; strangulation, 2, and asphyxiation and jumping from a high place, each one. Of the twenty-one homicides, 18 were due to firearms, one to hanging, and 2 to other means, and of these deaths, 7 occurred in feuds or affrays.

Ages—Of the decedents, 69 were between the ages of 21 and 30; 220 between the ages of 31 and 40; 341 between 41 and 50; 485 between 51 and 60; 519 between 61 and 70; 415 between 71 and 80; 212 between 81 and 90; 30 between 91 and 100, while one physician attained the age of 102 years. The greatest mortality occurred at the age of 61, when 68 deaths were recorded; at 70 with 65 deaths; at 62 with 63 deaths; at 55 with 58 deaths; at 60 with 56 deaths; at 75 with 54 deaths; at 56, 58 and 64 with 53 deaths; at 54 with 51 deaths, and at 44, 59 and 66, when 50 died. There were 9 deaths at 91, 7 each at 92 and 93; 3 at 94; 2 each at 96 and 98, and one death at 102 years.

Years of Practice—By periods of ten years, physicians died as follows during the year; in the first decade, 172, of whom 2 had been in practice less than one year and 16 less than two years; in the second decade, 356; third decade, 511; fourth decade, 598; fifth decade, 453; sixth decade, 221; seventh decade, 101, and eighth decade, 9, of whom 5 had been in

practice 70 years; 2, 75 years, and one each 78 and 79 years.

Military Service—During the year, 256 physicians died who had served in the Civil War, and of these 68 had followed the fortunes of the Confederacy, one having been the surgeon of the Confederate cruiser Alabama during her historic cruise of destruction; 86 had been medical officers of United States Volunteers; one a medical cadet; 11 had served in the hospital corps and 2 had been army nurses. There were 5 veterans of the Mexican War; 2 had served in campaigns against Indians; 22 had been in the Spanish-American War, and 20 had seen service in foreign wars. The Medical Corps of the Army lost 4 officers, of whom one had been surgeon-general; 3 had been members of the Medical Reserve Corps, and 18 had been contract or acting assistant surgeons. The Navy lost 12 medical officers, the Public Health Service 8 officers; the Indian Service, 6 physicians, and the organized militia, 36 medical officers, of whom 8 had attained the grade of surgeon-general.

Medical Positions—Medical colleges sustained the loss of 148 professors, lecturers, instructors or demonstrators; hospitals lost 355 members of staffs; municipalities, townships and counties, 194 health officers, and boards of education or school boards, 77 members. There were 54 deaths of members of state boards of health, medical examiners, and 123 of railway surgeons.

Civil Positions—Of those who died, one had been a member of congress; 2 governors of states; 4, United States consuls; 11, members of state senates; 39, members of the lower houses of legislatures; 35 had been mayors; 33, aldermen; 62 had served as justices of the peace, as clerks in the government service, or in various other civil positions; 15 had been postmasters; 24, editors of medical or lay journals; 19 had been clergymen, of whom 4 were foreign missionaries; 4 had been attorneys; 107 druggists; 40, bankers; 16, medical directors of life insurance companies; 10, dentists; 3, presidents of railway companies; 6, surgeons on steamships, and 4, chemists.

Association Fellowship—Of the 437 Fellows of the American Medical Association who died during 1915, one had been president, one a member of the Judicial Council, and two had been members of the House of Delegates.

PURPURA HEMORRHAGICA

H. W. Emsheimer, New York (Journal A. M. A., Jan. 1, 1916), reports a case of purpura hemorrhagica in a five and one-half year old boy in which, after failure of other treatment, the use of whole blood injections of human blood into the muscles brought about rapid improvement and recovery. He remarks on the difficulties of transfusion and serum injections to supply the deficiency of blood platelets in this disease, as the material cannot be used in sufficiently fresh condition, owing to the need of preliminary agglutination and hemolysis tests in the

former and of centrifugalizing in the latter. These disadvantages may be obviated in selected cases by immediate subcutaneous or better intramuscular injections of whole blood. Although not the first time this method has been successfully used, the records of previous trials in this particular disease are rare. Emsheimer gives a review of the published cases that have come under his observation, and offers the following conclusions: 1. The best methods of treatment of purpura hemorrhagica, in addition to the usual measure are: (a) subcutaneous or intravenous injection of human blood serum; (b) transfusion, and (c) intramuscular injection of whole fresh human blood. 2. The intramuscular injection of whole blood is a simple, harmless, effective procedure, and should be employed before other radical measures in all cases of severe purpura hemorrhagica; it may also have a wide field of usefulness in hemophilia and other blood disease; in bleeding from various parts or organs of the body; in wasting diseases, and in many infections.

DUES

The April issue is the last Journal to go to members in suspension. All members whose dues were not received by February 1st went into suspension and while many have since been restored to good standing by the receipt in the State Secretary's office of their dues still there is a considerable number whose dues have not yet been received and these will be dropped from the mailing list after the April issue has been mailed.

In addition to the loss of the Journal, which ought to amount to a great deal, members in suspension are not entitled to medico-legal protection for any act which may occur while they are in suspension. The Secretary is pleased to announce that up to April 8, 1916, 1900 member's dues have been received.

REMINISCENCES

To the Editor of the Journal of the Iowa State Medical Society:

My Dear Sir:

As the past appears to be rapidly receding, I beg to offer a few reminiscences of 1850 and later.

Medical history in no state had in its beginning a galaxy of more able men than did that of Iowa. The establishment of a medical college at Keokuk, which was made the medical department of the State University, and the publication of the Medico-Chirurgical Journal, drew upon the east for men of mature stature in all that pertains to professional and literary accomplishments.

Dr. J. F. Dillon, subsequently the eminent jurist, would no doubt have remained a member of the profession but for an infirmity which barred the use of the saddle.

Dr. J. F. Sanford as an accomplished surgeon and teacher, all-round scholar and master of the rostrum, has never had a peer. With him was associated in

college work L. D. McGugin, late member of the Ohio Legislature, who had distinguished himself as surgeon during the Mexican war. Dr. J. C. Hughes, surgeon-general of the state during the Civil War, Drs. J. M. Augear, A. M. Carpenter, H. T. Cleaver, John North, J. M. Shafer, and a number of others, were members of the faculties of that old pioneer medical college which turned out, if I remember correctly, over two thousand alumni well equipped, all sound practitioners, who found places of usefulness in this and adjoining states.

At Fort Madison were Drs. Edward Whinery and J. C. Stone, and at Davenport Drs. Weatherwax, J. H. Baker, A. W. Caldwell, Dr. French and Dr. E. H. Hazen, the latter a society man in the strictest sense of the word. He was ex-president of the Illinois District Medical Society, president of the Scott County Medical Society, corresponding secretary of the Iowa State Medical Society, and never failed to have a paper at meetings on advanced lines, always embellished with the high literary refinement peculiar to himself. He also held for many years the chair of Ophthalmology in the Medical Departments of the State University, and of Drake University. He was the first in the state to apply micro-chemical methods in toxicology; the first to employ and report the value of ophthalmoscopic examination in other than primary optical ailments. Also, by previous association with the eminent Dr. Salisbury of Cleveland, O., Dr. Hazen came as a practical bacteriologist, thus linking the old with the new.

At St. Clair was Dr. James Gamble, and at Dubuque Dr. Asa Horr and Dr. Wm. Watson, the latter in charge of the military hospital at Rock Island during the Civil War.

At Des Moines were Dr. H. L. Whitman and Dr. E. B. Fagan.

When located at Centerville in 1850, I met in consultation Dr. John D. Elbert of Oskaloosa, who was justly eminent as a surgeon, and early in the sixties met at the meeting of the State Society at Ottumwa Drs. S. B. Thrall and J. Williamson, both of whom have left enviable records. On the way I stopped at Prairie City to take dinner and to feed my horse, and also to call upon Dr. H. C. Potter, who was getting rich and wearing the same genial smile that he wears upon the streets of Des Moines today.

With this brief allusion to the foundation of medical history in Iowa, and to men who had an eye beyond themselves to benefits to the profession and the public at large, is it not worth while to inquire as to what specialisms and team work indirectly have to do in incubating and fostering many of the isms and pathies and frauds that infest communities today? Specialism and team work have come to stay. Is it not worth while to consider new problems incident to their advent? Again, is it not worth while to consider the standing aloof from prosecutions to prevent or punish the perpetrators of medical frauds? Let the swindled prosecute the swindlers. There is an old saying that if you get into the ditch to fight a dog you are a dog too.

A. G. FIELD.

IT PAYS THE MANUFACTURER TO MAINTAIN ETHICAL STANDARDS

The notice of the removal of the Dextri-Maltose manufacturing plant from Jersey City to Evansville, Ind., published in one of our advertising pages, deserves more than passing mention. It furnishes evidence of the natural growth of a manufacturing enterprise which is now vacating its old factory with 18,000 square feet of floor space for a new location in the Central West and in a new plant with 300,000 square feet of floor space—sixteen times larger than the old one.

This removal from a comparatively small to a very large housing also affords striking proof that success awaits the manufacturer who produces something the physicians really want, and markets his products in accordance with the standards set up by physicians for the sale of products they use. The first commandment for the direction of the manufacturer under these standards is: "Thou shalt not offer to both physician and public, by advertising or otherwise, anything which requires medical skill to properly use."

This commandment has been ignored by some manufacturers of infant foods, who have persistently educated the public with pseudopediatrics, thereby tending to increase infant mortality and hampering the physician in the practice of scientific, or even rational infant feeding.

But ultimate reform in the manufacture and sale of infant foods was as inevitable as the reform that has taken place in the sale of pharmaceutical products. The day of mystery and tradition in infant feeding is passing rapidly.

The recent simplification of bottle feeding, rendering it possible, without impractical complication, for the family physician to successfully adapt the diet to the individual baby, has brought about a strong conviction that the direction of infant feeding is distinctly the proper work of the physician.

This conviction has in turn created a demand for forms of carbohydrate foods which can be freshly prepared in exact proportions to meet clinical indications; and for their sale without directions for use, so that the physician can personally control the administration of the food.

The firm, which announces herewith its removal from the east to larger opportunities in the west, early recognized the requirement by the medical profession for a product used in infant feeding, made and sold exclusively for physicians, with no appeal, nor information to the public.

This firm deserves no special commendation for the course it has pursued, it being its duty to follow it. Reference to the sales of Dextri-Maltose is made simply to show that it is remunerative for manufacturers to treat the medical profession fairly.

BOOK REVIEWS

INTERNATIONAL CLINICS

A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles. Edited by Henry W. Cattell, A. M., M. D., Philadelphia. Volume IV, Twenty-Fifth Series, 1915. Philadelphia and London. J. B. Lippincott Company.

This, the twenty-fifth anniversary number, is made up of special contributions, the first by Sir William Osler, "The Coming of Age of Internal Medicine in America." Sir William states that twenty-five years ago there was not a single medical clinic worth the name in the United States. With the formation of the American Association of Physicians came the inauguration of clinical teaching of medicine in this country. Osler is not sparing in his objections to full time professors of clinical medicine. He does not believe that efficient teaching on this plan is impossible, but fears for the result.

Following Sir William Osler's introductory paper on the progress of clinical teaching, comes a series of papers by leading men on the progress in different fields of internal medicine.

The paper on Progress in Neurology and Psychiatry, prepared by Julius Grinker, gives an interesting account of what has been accomplished in twenty-five years.

The progress in obstetrics and gynecology during the last quarter century is presented by J. W. Ballantyne, M. D., F. R. S., Edinburgh, and is a valuable contribution.

There are three valuable contributions to surgery; by George W. Crile, Dr. C. H. Mayo and Dr. J. E. Sweet. These three papers have the same general trend; showing the progress made in twenty-five years on subjects, the surgery of which was little known prior to that time. The editor reviews briefly the history of the publication itself with a considerable degree of commendable pride.

A TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE

By Arthur R. Edwards, M. D., Professor of the Principles and Practice of Medicine and Clinical Medicine and Dean of the Northwestern University Medical School, Chicago. New (Third) Edition, Thoroughly Revised. Octavo 1022 Pages, With 80 Engravings and 23 Full Page Plates in Colors and Monochrome. Cloth, \$6.00, Net. Lea & Febiger, Philadelphia and New York, 1916.

In the Preface, the distinguished author states that the real advancement throughout the domain of medicine has made it necessary to rewrite the greater part of the work, and new chapters have been written on several subjects. "Particular attention has been given to details in accordance with the recent awakening of the profession to the importance of logical treatment."

The arrangement seems to be in a most logical order; the first section being devoted to "The Specific Infections" and includes 316 pages.

Under the Symptomatology of Typhoid Fever, the author states a most important fact which, if more fully taken into account, should influence the polypharmacy which is sometimes employed. Dr. Edwards says; "Typhoid is not an intestinal disease, but a general infection with bacilleemia," and on this contention the diagnosis is made and treatment based.

Following infectious diseases comes the section on "Diseases of the Circulation." Considerable space is given to the different forms of endocarditis. The reference to the bacteriological forms is brief and rather disappointing, considering the importance generally attached to them. The study of the symptoms and treatment of endocarditis is very full and extremely helpful to the practitioner. Some interesting observations are given on the compensatory value of arteriosclerosis according to Thoma and on the inflammatory conception of Huchard. The author has not endeavored to draw any conclusions as to the process being compensatory in some cases to maintain a saving blood-pressure or being always a degenerative change.

In logical order comes the section on Diseases of the Respiratory Tract. Then follows Section Four—Diseases of the Digestive Tract. In relation to ulcer of the stomach, we are always interested to know in reading a work on medical treatment what the author's views are on the treatment of chronic ulcers of the stomach, and we are relieved to find that Dr. Edwards says that chronic ulcers show little tendency to cicatrize. Further on, in relation to cancer of the stomach, we find the author relying on the autopsy findings for the percentage of cancers forming on ulcers.

In the section on the Kidneys, but little space is given to theoretical consideration, but the questions of diagnosis and treatment are full and altogether satisfactory; the same may be said in the remaining sections of the work, the purpose being in this volume to present a practical discussion of the diagnosis and treatment of the diseases which fall to the general practitioner of medicine.

AMERICAN ILLUSTRATED MEDICAL DICTIONARY (DORLAND)

A New and Complete Dictionary of Terms Used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology and Kindred Branches; With New and Elaborate Tables. Eighth Revised Edition. Edited by W. A. Newman Dorland, M. D. Large Octavo of 1135 Pages, With 331 Illustrations, 119 in Colors, Containing Over 1500 More Terms Than the Previous Edition. W. B. Saunders Company, 1915. Philadelphia and London. Flexible Leather, \$4.50 Net; Thumb Index, \$5.00 Net.

The Dorland American Medical Dictionary easily occupies the first place among medical dictionaries. None but the best trained among physicians can afford to be without an up-to-date medical dictionary at his elbow. The application of science to medicine and the coming of new terms from such application has compelled it. The synthetic new agencies brought into use by chemists and pharmacists in the laboratory and clinic room, brings confusion to the best memory unless fortified by dictionary reference. We feel quite sure that every journal editor would be gratified to know that every contributor had purchase a copy of "The American Medical Dictionary." Not only every physician needs the latest dictionary, but every hospital particularly needs one. It would indeed be of great advantage to the trained nurse who wishes to be sure of herself; the right application of terms and a proper knowledge of the meaning of terms is of fundamental importance. It is impossible for the reviewer to analyze the merits of a dictionary, but we are in a position to give testimony to the practical value of the American Medical Dictionary.

THE MEDICAL CLINICS OF CHICAGO

Published Bi-Monthly by W. B. Saunders Company, Philadelphia and London. Price \$8.00 Per Annum. Volume I, Number 3, November, 1915; 200 Pages.

Eight authors contribute to this number, presenting a variety of subjects of daily interest, which is one of the most valuable features of this publication. Dr. Charles S. Williamson gives a clinic on Typhoid Fever. Dr. Williamson states that when he was a hospital intern he saw more cases than he does now. This is probably every physician's experience, but it will be a long time before typhoid fever disappears, and hence the importance of the practitioner keeping his mind prepared with a knowledge of the most approved methods of diagnosis and treatment. Two cases of lead poisoning and one of gout constitute Dr. Williamson's contribution to this number.

Dr. Hamill gives an interesting clinic on Neuritis. The term neuritis is so generally given to painful conditions that a careful perusal of this clinic would not be amiss.

Dr. Frederick Tice has a clinic presenting a number of cases which are of joint interest to both the physician and the surgeon. The particularly interesting clinic is on nephritis. Our views are so materially changing as to the pathology and general relations of nephritis, that one may well study recent contributions on the subject.

Dr. Isaac A. Abt has a rather full clinic on a variety of children's diseases, and Dr. Robert Preble on "The Rheumatic Triad," sore throat, rheumatism and mitral lesions very common often badly treated.

Abdominal Pain, Differential Diagnosis, etc., by Dr. W. W. Hamburger.

Subacute Landry's Paralysis and Brain Tumor, Dr. Charles Mix, and the Eye Findings in Brain Tumor.

In the January number of the Medical Clinics may be found an additional clinic by Dr. Mix on Affections of the Nervous System Epidemic Cerebrospinal Meningitis. Dr. Hamburger gives an interesting lecture on Primary Carcinoma of the Liver, with Pathologic Findings by Edwin G. Kirk, Pathologist, Michael Reese Hospital.

A talk on Shock Reaction by Dr. George H. Weaver is particularly interesting. Other valuable clinical discussions by Drs. Mix, Hamill, Williamson and Abt, are found in this number. There are other interesting subjects presented, of equal value, which we have not space to consider.

THEORY AND PRACTICE OF BLOOD-LETTING

By Heinrich Stern, M. D., LL. D., Visiting Physician, St. Mark's Hospital; Consulting Physician, Methodist Episcopal Hospital; State Hospital at Central Islip, etc., etc Rebman Company, New York.

The author, in the Preface, states his belief that the number of advocates of blood-letting, as a remedial agent, is increasing, and that blood-letting will regain some of its lost prestige in view of a better understanding of the functional changes following the operation.

The first chapter is an interesting history of blood-letting. The treatment of disease by blood-letting seems to have been closely connected with development of civilization, and its employment dates from very early times. Following the history of this interesting subject comes the changes in the blood composition and the methods of local and general blood-letting. Part second relates to the diseases in which this method of treatment possesses distinct advantages, particularly in some cases of pneumonia (we have a distinct recollection of the advocacy of blood-letting in pneumonia), the use of blood-letting in sthenic pneumonia with overburdened heart, and in pneumonia complicated with acute bronchitis. The author, in a judicious manner, points out the advantages of blood-letting in a variety of diseases in which this treatment is but little considered. From personal experience, we can speak of the advantages of blood-letting in some cases of acute uremia, not as a means of cure, but as a means of carrying over a patient in imminent danger. Blood-letting fell into bad repute many years ago due to its indiscriminate use, but that it still has a place cannot be denied. We would recommend this book of 264 pages to those who would inform themselves on an interesting subject.

HOSPITALS AND THE LAW

By Edwin Valentine Mitchell, LL. B. of the Faculty of the College of Law of South Dakota; Author of "The Doctor in Court." Rebman Company, 141-145 West 36th St., New York City.

This is a very useful book of 178 pages. Its purpose is to inform those interested in hospitals what the relations of hospitals to the law are. Mr. Mit-

chell presents the theory of the law as relates to the liability of hospitals organized entirely for the care of charity cases, hospitals organized for both charity patients and pay patients, and hospitals organized for the purposes of gain. In earlier days hospitals were built and maintained entirely for charitable purposes and the Court decisions were that the institution was immune from liability for the negligent acts of its nurses and employees, provided reasonable care had been employed in selecting them. When hospitals changed from a purely charity function for a mixed one of charity and profit, the attitude of the Courts has changed. Within recent years, several Supreme Courts have held that it would be a great hardship to deprive a patient who had suffered serious injury at the hands of a negligent nurse or employee, the right to recover. The question of the legal rights of hospitals organized primarily for charitable purposes and then admitted a greater or less proportion of private pay patients, does not appear to be settled. But there is plainly a growing tendency to hold hospitals to a stricter accountability in the law for the negligence of nurses and employees. There has never been any doubt as to the liability under the law of private hospitals organized for profit.

The time has come when it is clearly to the interests of managers of all classes of hospitals (except state hospitals) to consider very carefully their relations to the law. We apprehend that some of the views held by the author as to the interpretation of what a charity hospital really is, will undergo some change when the subject is more thoroughly studied. Nevertheless, the value of this work is so great that we would advise our readers who are connected with hospitals, and particularly those who own hospitals, to purchase and read it with care.

SURGICAL OPERATIONS WITH LOCAL ANESTHESIA

Second Edition. By Arthur E. Hertzler, A. M., M. D., Ph. D., F. A. C. S., Surgeon to the Halsted Hospital, Kansas, Swedish Hospital, Kansas City, Mo., 327 Pages; 173 Illustrations; Cloth Bound. Price \$3.00. Surgery Publishing Company, New York.

The first edition of Dr. Hertzler's work covered only minor surgery. The reception of the book received, encouraged him to enlarge the second edition and include major surgery as well. Dr. Hertzler's wide experience has amply fitted him to complete this task. In this book, he gives in detail and with a wealth of illustrations, the method of using local anesthesia in practically all surgical procedures. Following a full description of the various drugs in local anesthesia, he proceeds to outline the various steps for successful work.

The plan of the book is excellent, and will be found very practical for the general physician as well as the surgeon.

THE OBSTETRICAL QUIZ FOR NURSES

A Monograph on Obstetrics for the Nurse in the Lying-in-Room. By Hilda Elizabeth Carlson. Published by the Rebman Company, 141-145 West 36th St., New York. Price 1.50.

A very helpful book, arranged as questions and answers, covering the broad field of obstetrics. The book has distinct value and should be widely used.

SIMPLIFIED INFANT FEEDING

By Roger H. Dennett, B. S., M. D., Adj. Prof. Diseases of Children, New York Post-Graduate Medical School, etc. Published by J. B. Lippincott Company. Price \$3.00.

This work lives up to its title—the author has simplified the problem of how and what to feed the infant deprived of its mother's milk. Theory seems to be of minor importance, while simple facts and rules are set forth in clean and understandable fashion.

The work opens with a synopsis of the text, first with reference to history-taking, and the physical examination; lastly, directions for making babies' foods. The essential requirements of an infants' food are enumerated, followed by a consideration of the caloric needs of the child, the proper quantity of food to supply these needs, and the conditions under which the caloric requirements should not be fulfilled.

The subject of diarrhea in bottle-fed infants is taken up, and the causes are classified, methods being given for treatment, with the indications for use in the different varieties. Similarly treated are the subjects of constipation, vomiting, and loss of appetite, and lastly breast feeding, both successful and unsuccessful, is handled in like thorough and simple manner.

YOUR BABY

A Guide for Young Mothers. By Edith B. Lowry, M. D. Published by Forbes and Company, Chicago.

This volume designed to be placed in the hands of prospective mothers for their information and guidance before, during and after pregnancy, certainly can be heartily recommended by physicians to their patients. Its subject matter is readable and easily understood, and the advice given can be endorsed freely.

The first part treats of the mother—her preparation for childbirth, the symptoms of pregnancy, care before, during and after labor, a short discussion ably handled on "Painless Childbirth," a chapter on the "Accidents and Incidents of Pregnancy," with a final word as to the young mother's care of herself after the birth.

Part II treats of the first care of the baby, its growth and development, its general care and clothing, its food, the accidents and diseases of childhood, and last but not least, a chapter on "Discipline"—how not to spoil the baby.

TRACHOMA

its Prevalence, its Effect Upon Vision and the Methods of Control and Eradication. Published by the National Com. for the Prevention of Blindness, 130 E. 22nd. St., New York City.

This is a popular presentation for the education of the layman in the methods of eradication of this menacing disease. The booklet is well prepared, well illustrated. Copies will be sent physicians upon request.

GONORRHEA, IN THE MALE, MODERN TREATMENT

By Dr. P. Asch (Strassburg), Translated by Dr. Faxton E. Gardner. Published by Rebman Company, 141-145 W. 36th St., New York.

The book comprises a series of twelve lectures, considering the incubation period, abortive treatment, hygiene, injections, urethritis, epididymitis, etc., etc. Numerous illustrations enhance the value of the book.

PAINLESS CHILDBIRTH, EUTOCIA AND NITROUS OXIDE OXYGEN ANALGESIA

By Dr. Carl Henry Davis, Rush Medical College, Chicago. Published by Forbes and Company, Chicago. Price \$1.00.

A thorough discussion of the various methods to secure painless labor and a report of the experience with nitrous oxide-oxygen gas. The author pleads for safe and better obstetrics. A book worthy of the careful study of every practitioner. Nitrous oxide-oxygen analgesia has passed the experimental stage, and the results obtained in the Presbyterian Hospital have established the practical use of this gas.

PRACTICAL MEDICINE SERIES

Skin and Venereal Diseases, and Miscellaneous Topics. Edited by Drs. Oliver S. Ormsby, Jas. H. Mitchell and Harold N. Moyer, Vol. IX of the Practical Medicine Series, 1915. Price \$1.35.

Nervous and Mental Diseases. Edited by Drs. Hugh T. Patrick and Peter Bassoe, Vol. X, Practical Medicine Series, 1915. Price \$1.35.

The above two volumes complete the series for 1915. Published by the Year Book Publishers, 327 S. La Salle St., Chicago. The literature of the topics mentioned is herein brought up to the close of 1914. They are very practical books for ready reference.

During August the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies: Armour and Co.:

Pineal Gland Desiccated.

Hoffmann-La Roche Chemical Works:

Scopolamine Stable Roche.

Larosan, Roche.

Pantopon (Pantopium hydrochloride).

A. Klipstein and Co.:

Coagulen, Ciba.

During August no New and Non-official Remedies descriptions were published. W. A. P.

PROPAGANDA AND REFORM

Alfatone—The Council on Pharmacy and Chemistry finds that Alfatone (The Norwich Pharmacal Co.) is a worthless alcoholic cordial and therefore ineligible for admission to New and Non-official Remedies. The Council points out that alfalfa is good cattle feed and that only postrum exploiters have suggested its use as a medicine for human beings. Based on the claimed composition, each maximum dose (3 fluidrams) should represent 45 grains of alfalfa, 1 grain of taraxacum, $\frac{3}{8}$ grain of genitan, 1/100 grain of berberin hydrochloride and 27 minims of alcohol. Since the bitter drugs are present in such small amounts that the preparation is almost devoid of bitterness and as the medicinal value of alfalfa is practically nil it is evident that whatever action Alfatone may have is due to the stimulant effects of the alcohol (Jour. A. M. A., Aug. 7, 1915, p. 548).

Uricsol—The Council on Pharmacy and Chemistry reports that Uricsol (Uricsol Chemical Co.) is a mixture of well-known drugs, marketed with false claims as to therapeutic action, with misleading and meaningless statements as to composition and under a name which invites uncritical prescribing. Examination in the A. M. A. Chemical Laboratory showed Uricsol to be a solution containing a large amount of sodium phosphate (64.20 Gm. in 100 Cc) with small amounts of lithium, nitrate, citric acid and glycerin, with probably some vegetable extract (Jour. A. M. A., Aug. 14, 1915, p. 638).

Duodenin, Armour—Duodenin, Armour (Armour and Co.) is said to be prepared from the glandular or epithelial layer and mucous lining of the hog duodenum and to contain the maximum amount of secretion and enterokinase in stable form. The Council on Pharmacy and Chemistry held that there is no evidence for the administration of secretin or enterokinase and that, so far as the available evidence goes, these substances are inactive when administered. The Council voted that Duodenin, Armour be not further considered until evidence is submitted to show that there are conditions in which secretin or enterokinase are absent and that these substances may be utilized by the organism if administered (Jour. A. M. A., Aug. 14, 1915, p. 639).

Jubol—Geo. J. Wallau, Inc., the U. S. agent of the French proprietary Jubol advises physicians to "jubilise" their intestines with "Jubol" if they suffer from constipation, hemorrhoids, and a long list of other conditions. The Council on Pharmacy and Chemistry held Jubol ineligible for New and Non-official Remedies because the composition is not declared; because grossly incorrect and unwarranted

claims are made for its therapeutic action; because the name does not indicate the alleged ingredients and because so much of the composition as is declared indicates an unscientific mixture (Jour. A. M. A., Aug. 14, 1915, p. 629).

Urodonal—Urodonal is a French proprietary sold in the U. S. by Geo. J. Wallau, Inc., and is said to contain a chemical combination of lysidin, sidonal and hexamethylenamine. The Council on Pharmacy and Chemistry finds that Urodonal is ineligible for New and Nonofficial Remedies because it is marketed under inconsistent statements of composition and with exaggerated therapeutic claims; because the name is non-descriptive; the combination is unscientific and because it is marketed in patent medicine style (Jour. A. M. A., Aug. 14, 1915, p. 639).

Oil-of-Salt—According to C. A. Mosso all diseases are "systemic poisons" in the body and his "Oil-of-Salt" destroys all poisons and hence cures all diseases. It is exploited chiefly to factory foreman and superintendents as a first aid treatment. From an examination in the A. M. A. Chemical Laboratory it was concluded that "Oil-of-Salt" is a mixture consisting of about $\frac{2}{3}$ linseed oil with $\frac{1}{3}$ of a mixture of essential oils, including trupertine, camphor and sassafras, containing a little chloride and free hydrochloric acid. It appears that "Oil-of-Salt" is also exploited under the name "First Aid Treatment" by the Pan-Alert Laboratories, Chicago (Jour. A. M. A., Aug. 14, 1915, p. 640).

Mixed Vaccines—There is no rational basis for the use of mixed vaccines. So far as infectious diseases, the etiology of which is known, are concerned they are caused by a single, specific organism as for instance in diphtheria, tetanus, meningitis, typhoid fever. The mere presence of a multiplicity of organisms in cultures taken from an infected region is no sign that the symptoms are due to all the organisms. The use of the stock mixed vaccines of commerce is irrational because it is based on the conception that infections are caused by more than one kind of micro-organism; it is harmful because it encourages superficial examination, slipshod diagnosis and routine treatment without individualisation; it is unnecessary because, when the physician desires to use more than one vaccine, he can inject them separately or mix them at the time of injection (Jour. A. M. A., Aug. 21, 1915, p. 719).

Fisher Remedy—According to the A. M. A. Chemical Laboratory Fisher Remedy, a nostrum sold for the treatment of syphilis (five capsules cost twenty-five dollars), is composed of mercury subsulphate (Turpeth mineral) and mercury with chalk (Jour. A. M. A., Aug. 21, 1915, p. 733).

Pertussis Vaccine—The New York Department of Health appeals to the physicians of New York for a more extended use of vaccine in the treatment of pertussis. Most favorable results have been obtained with the prophylactic use of the vaccine (Jour. A. M. A., Aug. 21, 1915, p. 724).

Foramint—Foramint are throat tablets said to contain a compound of formaldehyd and milk sugar. In the United States it is advertised to physicians while

in England the public is asked to use it for affections of many kind. The Council on Pharmacy and Chemistry reports that false statements are made in regard to the composition of Formamint; grossly unwarranted claims are made for its therapeutic properties, and therefore its exploitation to the public is a public danger. The Council published the account of the exhaustive bacteriologic examination to call attention to the evils connected with Formamint and to the inefficiency of all methods of sterilizing the throat (Jour. A. M. A., Aug. 28, 1915, p. 816).

THE 1916 SESSION

The attention of the members of the Iowa State Medical Society is called to the official program for the sixty-fifth annual session to be held at Davenport May 10, 11, 12, which appears in this issue. The program as published will be followed as nearly as is possible. If an author be absent when his title is called, his paper goes to the end of the program so it is particularly urged that all authors be in attendance when their subjects are called.

The Scientific Committee has endeavored to make the program unusually attractive, and its members believe that with the assistance of the Section Chairmen this has been accomplished.

Guests

The Society is especially to be congratulated in the out of state guests. In medicine, Dr. Alexander Lambert, of New York City, will deliver an address on Cardiac Pain. This address will follow the address of President Small on Wednesday Evening and every member of the Society should hear what Dr. Lambert has to say on this interesting and often times perplexing subject.

In surgery the Society has been equally fortunate in securing Dr. J. Rilus Eastman, of Indianapolis, whose subject is, The Alimentary Drainage Scheme in Man. It would be a difficult matter to select two more important or interesting subjects than these. Dr. Eastman's address will be given on Friday morning.

Home Talent

The home talent is also worthy of consideration. Attention is especially called to the number of new names appearing on this program. It would be an easy matter to make up a program if only the old wheel horses were invited but this would manifestly be unfair to the rank and file of the profession, so this year a number of new men were secured every one of whom has been vouched for to the committee.

The Scientific Committee is pleased to announce that, in addition to the newer men, such well known names as C. E. Van Epps, Iowa City; G. N. Ryan, Des Moines; E. A. Merritt, Council Bluffs; J. N. Warren, Sioux City; Carl Stutsman, Burlington; Earl Bellinger, Council Bluffs; J. W. Shuman, Sioux City; H. A. Minassian, Des Moines; E. T. Edgerly, Ottumwa; C. J. Rowan, Iowa City; C. E. Ruth, Des Moines; C. P. Howard, Iowa City, also appear on the program.

The profession and citizens of Davenport are mak-

ing every effort to make our stay in their city profitable and pleasant and the profession of the state should show its appreciation by making the attendance the largest in the history of the Society.

SOCIETY PROCEEDINGS

The Cerro Gordo County Medical Society held its regular meeting at Mason City March 22, Dr. A. J. Burge read a paper on Some Acute Abdominal Infections. The discussion of this paper and discussions on septic sore throats and skin eruptions due to drug action occupied the society for the remainder of the session.

The Clinton County Medical Society entertained members of the Scott County Medical Society and the Whiteside County (Illinois) Medical Society at dinner at the Lafayette Hotel, Clinton, March 24. Following the dinner papers were read by Dr. Arthur Steindler, of the State University and Dr. Joseph Miller of Chicago.

At the meeting of the Dubuque County Medical Society held March 14 at Dubuque, Dr. J. H. Schrup, of Dubuque, read a paper entitled, "There is no Difference in Principle Between Contract Practice and Division of Fees." The following is a synopsis of his paper:

The merit of the two questions at the present time seem to be sub judice. We ought all to investigate and settle them in our minds once for all.

Either method of doing business is a "dog in the manger" procedure and it practically so states in the wording of both the Contract Practice and Division of Fees Sections of Article VI of the A. M. A. Principles of Ethics.

Dr. Schrup quotes a paragraph from an Article in the Journal of the Indiana State Medical Society, January, 1916, which reads as follows: "Will the doctor ever rise to the point where he can be as independent as the ordinary day laborer who refuses to work except for an established fee." Calls attention to the fact that a doctor better do half-pay charity in some other better understood way, if he should take the charity ground for doing Contract Practice or Division of Fees. Advises all to read the Article of Dr. C. W. Burr in the New York Medical Journal for March 11, 1916, entitled "The Psychology of the Physician as a Wage Earner."

Points out how recent state laws strike at both evils. The division of fees law comes out explicitly against the one, while the workmen's compensation law is more subtly aimed at the other by offering what seems to be a substitute. Thinks the principle of the compensation law is correct as it is fundamental with the people, but that the individuals connected with the machinery of operation need watching as also do the unscrupulous doctors, who would abuse most anything.

Believes that physicians now holding contract positions will have an advantage over their colleagues

with the general relinquishment of contract practice (no exception in the case of railroads), as good service and acquaintance should be assets.

Concludes by reading an editorial of the March 11, 1916 number of the New York Medical Journal entitled "The Physician and Society."

The quarterly meeting of the Jackson County Medical Society was held at the Decker House, Maquoketa, March 31 with the following program:

Tonsils and Adenoids—F. J. Swift, Maquoketa.

The County Hospital—L. B. Carson, Maquoketa.

Carcinoma as an Infection—L. L. Riggs, Maquoketa.

At a meeting of the Pottawattamie County Medical Society held at the Grand Hotel, Council Bluffs, April 4th, Dr. E. A. Merritt read a paper on Röntgen Ray Evidences of Pulmonary Tuberculosis and Dr. G. D. Cleaver, had a paper on Scarlet Fever. Papers also were presented by Dr. M. E. O'Keefe, Dr. A. V. Hennessey and Dr. H. B. Moorhead.

At the regular meeting of the Polk County Medical Society held March 28, in a paper on Amyotrophic Lateral Sclerosis, Dr. Tom Bentley Throckmorton, brought out the following:

Amyotrophic lateral sclerosis is a disease of unknown etiology. In typical cases, symptoms referable to three distinct disease entities, i. e., bulbar paralysis, chronic anterior poliomyelitis, and spastic paraplegia, are present. The pathology consists of a degenerative process which involves the entire motor nerve apparatus. It is "essentially a death of the motor system and muscles." The prognosis is invariably bad. No suitable treatment in the way of curative measures has as yet been found. The essayist made a clinical presentation of a case, demonstrating the changes due to the involvement of the cortico-spinal and the spino-muscular neurons, and of the medullary motor nuclei.

Dr. M. L. Turner's paper on Pyelitis in Infancy Due to Colon Bacillus is thus summarized:

Usually occurs when resistance is low. Not much is known of the pathology because there are few deaths from it. Difference of opinion as to the channel of infection. Some believing that it is through the blood stream, others through the lymph stream. Others the urinary channel. Positive diagnosis can only be made by examination of urine. Special care should be taken in obtaining the specimen of urine. Should be either by rubber sheet or catheterization. Unless cystitis is present specimen is acid, slightly turbid and contains pus cells and colon bacillus. Difference of opinion in regard to treatment. Some claim they get better results with alkaline treatment, others using the urinary antiseptics, and keeping urine acid. Some cases tend to become chronic and seem to resist all forms of treatment. In these cases sudden and often change from alkaline to acid urine and back to alkaline is advised.

The Webster County Medical Society met in reg-

ular session March 28 at Fort Dodge. Dr. W. L. Bierring, of Des Moines, read a paper on Digitalis in Its Relation to Insufficient Heart Action. A number of out of town physicians were guests at this meeting and at the banquet served at the Wahkonsa Hotel.

The spring meeting of the Medical Society of Missouri Valley was held in St. Joseph March 23-24, under the Presidency of John P. Lord of Omaha. The meeting was characterized by a large attendance, an excellent scientific program and an elaborate entertainment of the members, ladies and guests. Among the distinguished guests who were present and read papers were the following:

Dr. Chas. A. L. Reed, of Cincinnati, who presented a paper setting forth the recent developments in idiopathic epilepsy from the surgical standpoint, in which he claimed that the germ producing epilepsy had been isolated.

Dr. Mazyck P. Ravenel, Prof. of Preventive Medicine, Missouri State University, made an excellent very sharp line of distinction between the useful vaccines and the numerous experiments which are being placed upon the market by ambitious manufacturers. Both of the above addresses were delivered at the evening session after the banquet and the hall was filled to overflowing. After these papers were read, the Society adjourned to the Elks Club where the members were entertained at a address on the Sera and vaccines in which he drew smoker in which some high class vaudeville was introduced.

Among the other important papers presented at this meeting was the one on "Epidemiology of Plague" by Dr. Carrol Fox, Surgeon United States Public Health Service, Washington. This paper was illustrated by lantern slides showing the anatomy of the disease-bearing flea.

Dr. C. W. Hopkins, chief surgeon of the Chicago and Northwestern Railway, Chicago, read an important paper on Traumatic Hernia (so called) in which he emphasizes the fact that such cases were rarely found in patients making claim against railroad corporations.

Dr. W. D. Sheldon of the Mayo Foundation, Rochester, presented a paper on the "Etiology of Lesions of the Nervous System" illustrated by some excellent pictures.

Dr. S. Grover Burnett presented a paper on the Treatment of Epilepsy in which he embodied an experience of twenty-five years, covering the subject thoroughly.

A symposium on the Knee Joint was participated in by Dr. H. Winnett Orr of Lincoln, Dr. Chas. Ryan of Des Moines and Dr. A. F. Jonas of Omaha.

A symposium on Syphilis comprised papers by Drs. Alfred Schalek of Omaha, W. T. Wootton, Hot Springs, and C. B. Francisco, Kansas City.

The remainder of the program consisting of twenty-one papers was carried out on schedule time and listened to with marked interest by those in attendance.

The banquet at Hotel Robidoux on Thursday evening was attended by 300 members, guests and their

wives. The ladies were entertained at the theatre, by an automobile trip about the city and a luncheon at Dr. Woodson's Sanitarium.

Omaha was selected as the next place of meeting in September.

At the regular meeting of the Physician's Club of Keokuk held March 14th at Hotel Iowa, Dr. J. F. Herrick, of Ottumwa, President-Elect of the Iowa State Medical Society, was the guest of the Club. Dr. Herrick addressed the members of the Club on the organization of medical societies and read a paper on The Autonomic Nervous System.

The semi-annual meeting of the Iowa Union Medical Society was held at Hotel Montrose, Cedar Rapids, March 7th with an attendance of fifty physicians. Dr. J. R. Guthrie, of Dubuque, read a paper on Tuberculous Diseases of the Appendix. Dr. H. J. Prentiss, of Iowa City, had a paper on The Variations in the Ethmoidal Labrynth. Discussion on Conservation in Ethmoid Surgery, was given by Dr. Fred W. Bailey, of Cedar Rapids.

A paper on The Etiology of Hodgskins Disease, was read by Dr. D. C. Brockman, of Ottumwa, and Dr. L. W. Littig, of Davenport, read a paper on Diastolic Blood Pressure: Its Significance.

One of the interesting features of the meeting was Some Medical Notes from France by Dr. C. P. Howard of Iowa City. The officers of the society are W. G. Carhart, Marion, President; Jennings Crawford, Cedar Rapids; Vice-President; Ira Nelson Crow, Muscatine, Secretary and George P. Carpenter, Cedar Rapids, Treasurer. The election of officers will take place at the annual meeting which is to be held in Cedar Rapids in July.

HOSPITAL NOTES

The board of directors of the Sioux Valley Hospital Association, of Cherokee, have adopted plans for the erection of a three story and basement, fire-proof brick and stone structure, costing \$25,000, to be located at Cherokee. This hospital is to be strictly modern in every respect.

At the annual meeting of the Oskaloosa Hospital Association held at Oskaloosa, March 13th, the question of turning the hospital over to Mahaska county was considered. The hospital property is estimated at \$35,000. The treasurer's report showed a balance of \$2,430 in hand, which reflected much credit to the management. The hospital patronage has so increased that a much larger institution is needed, and the management is desirous of meeting the requirement of the state law for the establishment of a nurses' training school.

WEBSTER COUNTY MEDICAL SOCIETY
ADOPTS RESOLUTIONS ON MEDICO-
LEGAL DENFENSE

The following resolutions on Medico-Legal Defense were adopted:

Whereas: The enactment of the employers lia-

bility law has removed from the injured employe a very lucrative source of income;

And Whereas: The doctor is the next in line and by reason of this fact malpractice suits are rapidly increasing in number so that at the present time the number of malpractice suits in the state is greater than at any former time;

Therefore, be it resolved that it is the sense of the Webster County Medical Society that the State Medical Society furnish more adequate protection to its members and to that end that the dues of the society be raised to meet such defense.

And be it further resolved that a copy of this resolution be sent to the various county medical societies for their consideration and co-operation and that it be sent to the State Journal for publication.

BIRTHS

Dr. and Mrs. Oliver T. Clark, of Keokuk, March 20th, a son.

DEATHS

John C. Lewis, M. D.; State University of Iowa College of Medicine, 1889; member of Iowa State and Allamakee County Medical Societies; a practicing physician for many years at Ridgeway and later at Waukon; died at his home in Waukon, March 22nd from pneumonia, aged fifty-seven.

James A. Mulnix, M. D.; College of Physicians and Surgeons Keokuk, 1878; a practicing physician of Dows, died at the home of his daughter in Cedar Rapids, March 28th, aged sixty-three.

Elihu L. Cook, M. D.; College of Physicians and Surgeons, Keokuk, 1876; died at his home in Harlan, March 28th, aged seventy-seven. Dr. Cook was a native of Iowa, and one of the oldest physicians in Shelby county, having practiced his profession at Harlan for twenty-seven years. During the Civil War he was fifth sergeant Company D of the Fourteenth Iowa Infantry, later served in the Ninth Iowa Cavalry.

John B. Findley, M. D.; a practicing physician of Des Moines for the last twenty-five years, died at his home in Des Moines March 27th from acute dilatation of the heart, aged sixty-seven.

Patrick Joseph Barry, M. D.; State University of Iowa, College of Medicine, 1891; a practicing physician for several years at Auburn; died at the hospital in Carroll, March 5th, from pneumonia, aged forty-nine.

Orlyn Lee Chaffee, M. D.; Chicago Homeopathic Medical College, 1902; member of Iowa State and Bremer County Medical Societies; died at Mercy Hospital, Waverly, March 2nd from pneumonia following an operation for gastric ulcer and gall-bladder disease. Dr. Chaffee was a native of Iowa. He was born at Johnston, Jones county and was the son of Rev. W. N. Chaffee. For thirteen years Dr. Chaffee practiced his profession at Waverly where his ability as a physician and surgeon, his winning personality and his love for humanity gave him the

respect of his fellow physicians as well as the love and esteem of his patients. Dr. Chaffee is survived by his wife and one son.

Edgar Brenton Henderson, M. D.; State University of Iowa College of Medicine, 1897; fellow of the American Medical Association; member of Iowa State and Iowa County Medical Societies, died at Marengo, March 17th from Bright's Disease, aged forty-five. Dr. Henderson was the eldest son of Judge J. H. Henderson, Commerce Counsel for Iowa. He was born at Indianola June 23, 1872 and in 1898 was married to Miss Effie Bussell, of Indianola, who with a son and daughter survive him. In 1897, Dr. Henderson located at Marengo where he practiced his profession until his death. His skill as a physician, courteous disposition and strong characteristics won for him the respect and confidence of the people. His associates in the medical profession placed a high estimate on his professional ability and had a deep regard for his friendship. Although a sufferer from Bright's Disease for some time, he kept up his practice. Returning from a night call, dismissing his driver, he stopped at his office and on the way home was stricken and found dead on the sidewalk at six o'clock the morning of March 17th.

CHANGES OF LOCATION

Dr. H. E. Harlow, of Union, will remove to Zearing.

Dr. D. W. Harmon, house physician at Mercy Hospital, Waverly, has purchased the practice of Dr. M. N. Gernsey, of Readlyn and will remove to that place. Dr. Gernsey will locate at Waverly.

Dr. Max Emmert, of Des Moines, formerly of Atlantic, will remove to Omaha, where he has accepted a position on the staff of the Medical School of the University of Nebraska.

MEDICAL NEWS

Dr. Mary Lawson Neff, formerly of Des Moines, has located at Phoenix, Arizona.

Dr. F. B. Sigworth, of Anamosa, who has been spending some time at Phoenix, Arizona, has gone to Florida.

Dr. Mixie Cunningham, of Malvern, who has been physician at Oakdale, has been appointed assistant superintendent of the Oakdale Sanitarium. Dr. R. H. Lott will occupy the position formerly held by Dr. Cunningham.

Dr. Ralph W. Mendelsohn, of Des Moines, who has recently returned from work in the typhus district of Serbia and who formerly had service under Col. R. C. Gorgas in the Canal Zone, has been appointed sanitary expert for the government of Siam.

Dr. Arthur L. Wasburn, the efficient city health officer of Oskaloosa, has been honored by a call from the Emergency Committee, Scottish Medical Service, Royal College of Physicians, Edinburgh, Scotland. Dr. Washburn will sail for Scotland this month.

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THE SURGICAL TREATMENT OF EXOPHTHALMIC GOITRE*

CHARLES J. ROWAN, M.D., F.A.C.S., Iowa City

In a discussion of the surgical treatment of exophthalmic goitre, it seems to me in the first place essential to decide which cases should receive medical treatment and which ones properly belong to the surgeon. There are extremists on both sides of this question, on the one side those who maintain that every case of exophthalmic goitre is essentially a surgical case and that the operation should be done as soon as a diagnosis is made, and, on the other side, those who claim that surgery should never be resorted to until everything in the medical line has been exhausted, forgetting that, in the meanwhile, the patient may also become exhausted and in no fit condition for an operation which then offers the only relief. The middle course here is undoubtedly the proper one, namely that the mild cases, and sometimes even those of moderate severity should receive the benefit of a properly conducted course of medical treatment, and that, also, those cases that have progressed so far that they cannot stand even the slightest surgical procedure, should be regarded as medical cases, with possibly the addition of injections of boiling water as advocated by Porter, but which can hardly be without danger, and which has not been tried out sufficiently as yet to warrant its general adoption. In addition, it is often advisable to prepare patients for operation by medical treatment, consisting of complete rest in bed, an ice bag to the heart and to the goitre, and hydrobromate of quinine or tincture of belladonna by mouth. In those cases that seem suitable for medical treatment, it should be emphasized that the treatment should not be persisted in unless the patient shows a prompt and marked improvement, and unless the improvement continues uninterruptedly. If the improvement is only enough to allow the patient to be up and about by using great care; if the patient is improved, but is still

an invalid and subject to exacerbations brought on by every little exertion or excitement, then the medical treatment should give way to the surgical treatment. The chief harm done by medical treatment is due to procrastination brought about by apparent slight improvement until finally, organic changes apart from the thyroid gland supervene, such as a bad myocarditis, for then, although an operation, which has become dangerous, may relieve the hyperthyroidism, it cannot restore the heart, which has become crippled, and will remain so as long as the patient lives.

We have all undoubtedly noticed that sometimes an exophthalmic goitre makes its first appearance simultaneous with or soon after an acute infection, especially of the nose or throat. This occurs too often to be a mere coincidence; and Dr. Frank Billings has for some time been impressed with the frequency of exophthalmic goitre in cases where there is present a chronic infection in the nose, throat, or mouth, as for instance, chronic tonsillitis, pyorrhea alveolaris, or sinus infection. He has had, up to the present, over thirty cases which he regards as cured after cleaning up a focus of infection, plus the ordinary medical care, and the use of vaccines in some cases. This, in connection with the fact that Rosenow generally succeeds in isolating and growing bacteria from the tissue of the gland removed at operation, and preparing a vaccine from them, is of extreme importance. Billings is not ready to say yet just what percentage of exophthalmic goitres are caused by a focal infection elsewhere, but he is convinced that the proportion is a considerable one.

The use of serums cannot be said to have been successful in the treatment of exophthalmic goitre, although many of them prepared in different ways have received a fair trial. We must remember, in this connection, that exophthalmic goitre belongs to that group of diseases which, in the ordinary course of events, are likely to have periods of remission and exacerbation, so that improvement after the use of a drug or serum is not necessarily caused by that drug or serum, and that before we can claim a specific

*Read before the Sixty-fourth Annual Session of the Iowa State Medical Society, Waterloo, May 12, 13, 14, 1915.

action for a serum in these cases, the improvement must be decided and fairly constant, which does not seem to be the case.

The correlationship between the thyroid and the other glands of internal secretion, especially the ovary and thymus, and to a less extent, the adrenals and pituitary body, is well known. This has led to attacking the thymus gland in cases of exophthalmic goitre, either by resecting it at the time of operation on the goitre, or by subjecting it to a course of X-ray treatments in order to cause its atrophy. The results have not been satisfactory, nor would we expect them to be, when we consider that no matter what the relationship between thymus and thyroid, in exophthalmic goitre, the main changes have occurred in the thyroid and not in the thymus. In those cases which do not respond to surgical treatment, however, it may be worth while to subject the thymus to X-ray treatment, as it is not likely to do harm, and if the thymus is enlarged may do some good. The X-ray treatment directed to the goitre itself fails so consistently that I do not regard it as justifiable, inasmuch as it causes a loss of valuable time.

The cases of hyperthyroidism without enlargement of the thyroid gland are often most refractory to treatment. They are the least likely to be benefited by surgery, which should in these cases, be resorted to only exceptionally and when everything else has failed.

In considering the operation itself, it must be realized that while it is important to the patient that it be well planned and skillfully performed, it is also of great importance to know when is the proper time for operation and just how extensive the operation should be; whether it should consist in merely a ligation of the arteries or a removal of part of the gland; and if a part of the gland is to be removed, how much of it; or should we remove one lobe, and in addition ligate the superior pole of the opposite side. The extent of the operation should be determined by two factors; first, is the patient in condition to withstand an extensive operation; secondly, how much of the gland must we remove to relieve the hyperthyroidism, and at the same time not be in danger of causing myxoedema. It is in estimating these two factors that good surgical judgment comes into play, which, after all, is at least as important as good technique, and is only to be acquired as the result of experience, careful observation and sane thinking. The amount of gland to be removed will depend on the age of the patient, the degree of the symptoms, the size of the gland, and the amount of degeneration which has occurred in it.

As to the technique of the operation, the essentials are prohibitory rather than mandatory, namely, not to unduly prolong the length of the operation, not to allow excessive loss of blood, not to handle the gland too much or too roughly, and not to injure important neighboring structures, such as recurrent laryngeal nerve, trachea, or para-thyroid glands.

The choice of an anesthetic is an important consideration in planning the operation. The arteries can easily be ligated under novocain anesthesia, but most surgeons have concluded that for the removal of a lobe, ether is preferable, when it is preceded by morphine and atropine and administered by a competent anesthetist. Crile is of the opinion that the development of acidosis has played a most important part in those cases where hyperthyroidism has resulted in death, and when we observe these patients with dry tongue, delirium followed by coma, disturbed respirations, acetone odor in the breath, and scanty urine containing acetone and diacetic acid, we must agree with him; and when we know that ether anesthesia may determine the onset of acidosis and coma in other conditions, such as diabetes, we must admit that in bad cases of exophthalmic goitre where it becomes necessary to do an extensive operation we have the best possible indication for the use of "anoci-association," followed by continuous normal salt solution per rectum or even intravenous injections and large doses of sodium bicarbonate by mouth or per rectum.

No hard and fast rules can be laid down as to what operation should be done, as that will depend on the individual case and the judgment of the surgeon, but in general we may say that in very mild cases without much enlargement of the gland, which do not respond to medical management, the ligation of both superior poles is generally indicated, as being simple, not dangerous, likely to cause a cure, and easily followed by a more radical procedure if it should become necessary.

In the average case with considerable enlargement of the gland, the operation should consist in removal of the largest lobe, with removal of the isthmus in some cases, and in addition the ligation of the superior artery of the other lobe in selected cases.

In the more pronounced cases, where a severe or dangerous reaction from an extensive operation is feared, the procedure that is carried out at the Mayo Clinic is undoubtedly the best and safest, namely, one superior thyroid artery is ligated; if that is followed by considerable reaction, the other superior artery is ligated a week

or ten days later, and a lobe is removed still later, when the improved condition of the patient, following the ligations, warrants it. If no pronounced reaction follows the first ligation, then the lobe is removed at the second operation, a week later.

The symptom which generally is least benefited by the operation, is the exophthalmos, and in the cases where it is very pronounced we should consider the excision of the cervical sympathetic ganglia as recommended by Dr. Charles Mayo.

I do not regard this as the proper place for a description of the technique of operations on the thyroid gland and so will not enter into that.

In concluding, I would say, that while some cases of exophthalmic goitre belong to the internist, the majority of them are surgical, and that proper surgical treatment will cure in the neighborhood of seventy per cent. of the cases, and greatly improve most of the remaining cases, and I would emphasize the fact that great harm is done by medical treatment in these cases where only slight improvement results temporarily, and where one drug after another is tried, until finally, operation is recommended when the patient is no longer a good surgical risk, or when changes have occurred in other organs, especially the heart, which will not be, and cannot be, restored to normal by the relief of the hyperthyroidism.

Discussion

Dr. Murdock Bannister, Ottumwa—I hardly feel competent to discuss Dr. Rowan's paper. In the main my views coincide with what he has said. I wish merely to report what seems to me to have been a rather marked cure of a case of beginning exophthalmic goiter.

The patient was a woman of thirty who had been healthy with the exception of the fact that she had had very badly infected tonsils and that she had developed all the classic symptoms of exophthalmic goiter, then existing for almost a year. After removal of the tonsils, which was done about ninety days ago, the pulse dropped from an average of 150 to 160 to about 80, and has remained so. She has had no other treatment except a certain amount of rest in bed following tonsillectomy.

I am aware that this is rather crude in the way of report of a case, but it seems that the removal of the infected tonsils has had a marked effect upon the hyperthyroidism.

Dr. James T. Case, Battle Creek, Michigan—I could not sit still after hearing just one remark made by Dr. Rowan. As a surgeon I appreciate his standpoint and agree with it in almost every detail, but one statement made I can not agree with, and I would like to submit the matter to the house in the light I see it. I refer to his remark that the X-ray

treatment has consistently failed in cases of hyperthyroidism. I question that statement. I do not doubt it has been made sincerely, for I am sure Dr. Rowan has given the subject careful consideration. But I would call attention to the fact that there is no literature on the subject of the Roentgen treatment of hyperthyroidism which applies in the present-day sense of X-ray therapy.

In the ordinary X-ray treatment to which the literature refers, the patient is merely laid upon the table, the X-ray tube placed in position, the rays applied so many minutes, etc. In the books you will find no specific references which will enable a man to duplicate the treatment of the writer of the article. The same is true of all but the most recent articles in medical journals. There are a number of absolutely essential principles to be set forth in describing an X-ray treatment: The hardness of the tube, the distance from the surface of the skin to the part to be treated, the amount and kind of filtration, the number of minutes exposure is made, and the number of milliamperes passing through the tube. Any reference to X-ray treatment which does not give these details of technic must be disregarded as having to do with the old-fashioned method which should be discarded, though one still finds it employed to a large extent. In the hands of the best men the old method is being rapidly superseded by improved technic.

The newer method of treatment has been given the name of intensive X-ray therapy. Instead of putting the tube at a considerable distance from the skin it is now placed as close as possible to the skin, thus intensifying the effect of the treatment. Between the tube and the patient is interposed a filter consisting of a large sheet of leather and at least three or four mm. of aluminum.

The skin surface through which the treatment is given is divided into many small areas. In my practice I divide the skin of the neck into six or ten areas, in the case of the thyroid, each of these areas being treated in succession so that the ray which penetrates each skin area goes to the goiter. During the administration of the treatment, the entire skin of the neck is carefully protected with lead, except the area actually receiving treatment. This area is covered by the filters. But no skin area is treated twice, for the amount of filtered X-ray which the skin will tolerate is limited. By means of filtration we multiply the useful X-ray twenty or thirty times, as only the hardest rays which can go through the aluminum pass to the goiter, and the skin will tolerate these in large doses. We multiply that dosage through each area by eight times, there being, say, eight areas through which this ray is sent to the goiter, and thus we have 200 or more times as much X-ray treatment given to the goiter itself as would be accomplished by the ordinary X-ray treatment to which most of the available literature refers.

As to the results. In treating cancer about the mouth or face, I have often noticed that the patients complain of their mouths being dry. Their salivary glands simply dry up over night, and one patient said

that in his efforts to keep his mouth moistened, he drank a whole pitcher of water the first night following treatment. The intensive treatment puts the salivary glands right out of action. And the same thing happens in the case of the thyroid gland. The patients are clinically helped just as much by this intensive treatment in a purely hyperthyroid case, as by the surgical treatment. Neither the surgical nor the X-ray treatment aims at the real cause of the disease. They are both symptomatic treatments.

Dr. Rowan properly called attention to certain complications occurring in cases where surgical treatment is delayed. These same conditions complicate X-ray treatment. Where myocardial dangers are imminent, surgery should supplant X-ray treatment.

In confirmation of the efficiency of X-ray treatment, borne out in my own practice, I could cite about thirty cases of hyperthyroidism treated by the X-ray in which the results were as good as could have been obtained by surgery. I would mention the work of Dr. Halstead and his X-ray assistants in the Johns Hopkins Hospital in Baltimore, where the X-ray is made a routine post-operative treatment, and supplants surgery in many cases of hyperthyroidism.

Dr. C. E. Ruth, Des Moines—I have been very much interested in this paper, and wish to compliment Dr. Rowan upon the excellent manner in which he has presented the main facts that we recognize with reference to it. And I was also very glad indeed to hear what Dr. Case had to say in defence of X-ray treatment, for I believe this to be a very important addition to our knowledge along this line.

There is this other difficulty that is always present and must be kept in mind in dealing with or considering the problems that arise in connection with hyperthyroidism: The size of the thyroid gland does not by any means determine its activity.

Again, we do not yet know what is the cause of hyperthyroidism. We see in the tachycardia one of the various manifestations of a toxic process, the enlargement is one of the results, and I was glad to hear what the essayist said with reference to the difficulties that attend the determination of the amount and kind of operative procedure we must make directly upon the gland or in elimination of its blood supply.

A few days ago, while in Arizona, a number of cases were brought to my attention that had been operated on by excision of the largest lobe, as the essayist says should be done. But in these cases so operated the doctor declared the operation to be entirely unsuccessful, because, while temporarily there had been marked improvement, here was seen a continued increase in size with tendency to recurrence of the manifestations because the cause was still operative. And so the doctor was not willing to credit the operative procedure with any curative influence in the cases, because the symptoms remained and actively increased with the lapse of time.

Another point which has not been mentioned here and to which I want to call attention again lest some of you forget: The autointoxication that results from intestinal stasis has led Arbuthnot Lane, to make the declaration that we will get better, and that he gets more satisfactory results, by the cure of the intestinal stasis along the lines indicated by Dr. Reed this morning, viz., in the removal of the colon, when his cases of tachycardia and hyperthyroidism rapidly improve. How permanent this improvement will be, whether it is simply the relief of a symptom, or of the manifestations resulting from the increased activity of the gland, it is probably too soon yet to say. But Mr. Lane is just as positive in his stand with reference to the colon being an important factor in these cases, as are those who have been led to believe in the importance of removal of a portion of the gland to lessen the dangers from its activity.

Dr. J. F. Herrick, Ottumwa—I feel, as has been suggested by several of the speakers, that the last word has not been said on exophthalmic goiter. Dr. Bannister referred to one case in which apparently the cause was the existence of infected tonsils. The essayist suggested the possible cause to be a toxemia. I think there can be no question but exophthalmic goiter is an end result and not a primary disease. If that is true, it is very important that we should seek the primary cause whether it be an infection or a toxemia coming from the abdominal viscera, as has been suggested by Dr. Ruth. It does not make any difference if the condition is an end-result, the primary cause should be sought.

With reference to X-ray treatment, I was very much pleased that Dr. Case, who can speak with authority on this subject, has discussed the matter as he has. I have had experience in treating three cases of exophthalmic goiter with the X-ray. The technic of the intensified treatment was only being developed when I treated the first and second cases. The third case I treated more nearly in accordance with the technic described by Dr. Case. The aluminum and wet sole leather filter was used. The Holzknecht method of measuring the dose was employed, and the treatment was carried out according to the accepted principles so far as I was able to apply them.

As to the results in the cases mentioned. One, a chronic case, was greatly improved. It was refused operation because it was considered that it was nearing the point of myxedema as the result of degeneration. The patient, however, was very much improved. The other two cases were more acute, one very much so. The result of the treatment was great benefit, and in fact apparent cure. In one case the treatment was carried too far, so that I have now to give the patient thyroid because I have evidently overdone the treatment. As we know, glandular structure is very susceptible to the action of the X-ray. Glandular structure that is so easily reached as the thyroid, can be destroyed by the X-ray. The only question, then, is to so treat it that you do not destroy too much. In the X-ray you have a flexible means of treatment, whereas if you

cut out tissue you can not replace it. You can regulate your treatment with the X-ray.

Formerly the treatment of exophthalmic goiter was by operation on the sympathetic in the neck. When you treat exophthalmic goiter with the X-ray you can not save your sympathetic, you are treating the sympathetic at the same time, so that I believe you get a quicker action in reduction of the exophthalmos and other symptoms by the X-ray treatment.

In conclusion I would say that I do not consider that anything will eliminate surgery in all cases, but I feel that the X-ray should have careful consideration.

Dr. Granville N. Ryan, Des Moines—One point of particular interest to me that was brought out in Dr. Rowan's most excellent paper was that of focal infection. My attention has been drawn to a marked hyperthyroidism produced by infected tonsils, although the infection appeared to be a latent one and yet a subsequent chain of evidence has substantiated this point. The tachycardia was so pronounced in this case that I referred her to Dr. Babcock of Chicago, stating to him that I thought the focal infection of tonsils was responsible for the hyperthyroidism. After a careful study of the case the doctor advised that the tonsils be removed at once. The patient was taken to the Henrotin hospital and Dr. Jordon removed the tonsils under local anesthesia. There was a marked anaphylaxis with exacerbation of symptoms. The patient remaining in the hospital for ten days and then returned home to Des Moines. In three weeks she had lost fifteen pounds, upon giving her the rest cure and some medication, in six weeks she completely convalesced and is at the present time up to her standard of weight as well as physical condition.

Dr. A. G. Hejinian, Anamosa—In exophthalmic cases I have always followed Dr. Rowan's plan of treatment, but I would like to report an exceptional case that came under my observation about four years ago.

A lady about forty-four years of age had been in the Mayo Clinic twice. Hyperthyroidism in this case was so extensive the first time she was in the hospital at Rochester that she was told by her attending physician that they could not do a radical operation, and ligated the superior thyroid arteries, both right and left, until she had improved. Then in two or three months she returned and the left lobe of the gland and the isthmus were removed. She had improved greatly and for about six months was better, then gradually she commenced to get worse, and very much worse at each time of her menses. The last time she had an attack the condition was so severe that her physician did not know what to do, and brought her to our hospital. She vomited constantly, was not able to retain nourishment over a period of two weeks or more, and had excessive diarrhoea, which, as you all know, are symptoms of last stages of hyperthyroidism. She was so much emaciated that she looked like a skeleton. We resorted to rectal feeding and she was kept quiet and

alive in this manner. As she was near the menopause I advised as a last resort to bring about artificial menopause, because at each time of her menses she had very great exacerbation of symptoms.

When we opened the abdomen as quickly as we could, we found enlargement and cystic degeneration of both ovaries, they were badly diseased, and we quickly removed them. After this operation she improved wonderfully and left the hospital in about three weeks. When at the end of a year I saw her I did not recognize her, she had gained about fifty pounds, and has since remained, her physician informs me, perfectly well.

This is a case that I leave for your consideration and in regard to which you may reach your own conclusions.

Dr. Rowan—In closing this discussion I wish only to refer to Dr. Case's remarks as to the use of the X-ray. And incidentally this gives occasion to repeat that exophthalmic goiter is one of that class of diseases which has periods of remission and exacerbation. We must be very careful in crediting any certain treatment for the improvement which follows. We know that many things have been credited with its cure, because the improvement will follow no treatment very often, just as much as it will follow any certain line of treatment. The old method of using the X-ray in these cases received great credit for cures, and it was only after long trial and in many cases that this treatment has been generally abandoned by internists as well as by surgeons. I must admit that Dr. Case, in using the intensive X-ray treatment, may be able to get results where they could not be had by the old method. But I still must maintain that I do not believe it has been tried out in a sufficient number of cases. The number of cases mentioned by Dr. Case, or the number of cases which have been mentioned by others, is no proof as to its value in such a disease as exophthalmic goiter. Therefore I would say that I would reserve my judgment in regard to the treatment of exophthalmic goiter by the intensive X-ray method until we have treated a sufficiently large number of cases to intelligently determine anything about the results.

Dr. W. L. Bierring, Des Moines—From the standpoint of the internist, there are two points to be considered with reference to exophthalmic goitre: First, the source or cause, and, second, the degree of thyroid toxæmia. If the influence that provoked the hyperthyroidism can be determined, such as some form of nervous shock, excitement, or tire, then a systematic rest cure will often be beneficial. But this treatment must never go beyond a certain limit, for if there is to be relief it will come within six or eight weeks. During this period there should be the most careful observation of the degree of improvement in the thyroid toxæmia. If symptoms of myocardial disturbance continue and the condition of hyperthyroidism is clearly due to a hyperplastic or hyper-active thyroid, then the sooner some form of depleting operation of the thyroid is carried out,

the better. Again, if there is definite evidence that the source of the thyroid toxæmia is extra-thyroidal in origin, then the logical treatment is clearly indicated, whether surgical or by other means.

It is often a most difficult problem to determine which cases are amenable to non-surgical measures, but the mistake is more frequently made of waiting too long before some form of thyroid depletion is carried out.

ECTOPIC GESTATION*

With a Report of Three Cases

A. D. McKINLEY, M.D., Lawler

By the term extrauterine pregnancy, or ectopic gestation, we mean those cases in which the fertilized ovum is arrested some place in its course from the ovary to the uterus, and there continues its development.

Until 1883 it was considered from a pathological point of view only, as few or none of the cases were recognized clinically. To Tate is given the distinction of operating in this condition first, and from his operation on, clinical interest and attention increased rapidly, until today the country doctor is expected to be keen enough to diagnose such a condition without the aid of, or the necessity of, the patient seeing the specialist.

Frequency—Before this condition was recognized clinically and at autopsy, observers were led to make the statement that it was so rare that the directors of large obstetrical clinics might never see a case of it. Today we are led to suppose that the frequency has markedly increased, yet we cannot but believe that the earlier observers were misled in its frequency by not recognizing the condition. To illustrate the increase, Parry in 1876 was able to collect only 500 cases that had been reported up to that time, and in 1892 Schrenck collected 610 cases which had been reported during the five previous years.

This increase has been experienced by individual observers also, so we must believe that the increase in frequency of this condition is more apparent than real, due undoubtedly to improved methods of diagnosis and a greater knowledge on the subject.

In a paper read by Dr. Alfred Baker Spaulding at the last meeting of the A. M. A. held in San Francisco, he states that ectopic gestation is a frequent abnormality of early pregnancy, but that clinicians vary in their estimate of frequency, depending on whether their clinical experience has been gained as a necropsy surgeon, a

gynecologist, an obstetrician, or a general practitioner. Formad, a coroner's physician in Philadelphia, in 3500 necropsies found thirty-five deaths from ectopic gestation. Michel has reported twenty-six cases of ectopic gestation in 6000 gynecological conditions, while Hartz, reports 3.4 per cent. of ectopic pregnancies in 1700 specimens examined in the gynecological laboratories at Jefferson and St. Joseph's hospitals in Philadelphia. Finally from a statistical study of 36,668 clinical patients, he estimates the relative frequency as follows:

| | |
|------------------------|---------------------|
| General practice | once in 2,820 cases |
| Gynecology | once in 227 cases |
| Pregnancy | once in 131 cases |

From this we must conclude that this condition is much more frequent than supposed to be.

If to every 131 cases of uterine pregnancy, one extrauterine pregnancy occurs, this subject deserves more attention from us than we have been giving to it.

Dr. DeLee, in his discussion of Dr. Spaulding's paper, states that "the so-called colics shortly after marriage, sometimes diagnosed as appendicitis, are not infrequently ectopic gestation aborting through the tube, and that prostitutes' or actress' colic are also frequently tubal abortion." Therefore, if these cases were properly diagnosed, the frequency of ectopic gestation would be even greater than one to 131 cases of normal pregnancy.

Etiology—A great many theories have been advanced to explain the occurrence of ectopic gestation. However, the etiologic classification of Williams must be considered the best according to the present state of our knowledge on the subject, and as Williams says, the etiology of this condition is not a simple matter, and there is no universal cause for all cases of it.

Classification—The fertilized ovum may be arrested at any point between the ovary and the uterus. Therefore, there may be either ovarian, tubal or abdominal pregnancies described. While there is some dispute as to whether the latter is possible, there is every evidence that it can and does occur, though rarely.

Four points, according to Spiegleberg, are necessary in the diagnosis of true ovarian pregnancy; viz., (1) The tube on the affected side must be intact. (2) It must be connected with the uterus by the utero-ovarian ligament. (3) The fetal sac must occupy the position of the ovary. (4) Definite ovarian tissue must be demonstrated in its walls. To show how rare true ovarian pregnancy is, Williams was only able to find four cases of it reported in the past 100 years.

*Read before the Northeastern Iowa Medical Society at Calmar, Iowa, October 14, 1915.

Tubal pregnancy, which is the common type of extrauterine pregnancy, may be subclassified as ampular, isthmic and interstitial, according as the arrest of the fertilized ovum occurs in the various portions of the tube, and their relative frequency is in the order named.

Tubal pregnancy may rupture or abort itself before the eighth week, or the tube may accommodate itself to the changed conditions and the pregnancy go on to term. It is now generally believed that the tube aborts itself in about 78 per cent. of the cases as against 22 per cent. rupturing through its wall, and that in these 22 per cent. of rupture cases, tubal abortion is only prevented by a closing of the fimbriated end of the tube.

The process of tubal abortion is analogous to that which takes place when the uterus aborts itself.

In the case of ruptured tubal pregnancy, the sight of implantation is usually at some distance from the fimbriated end. In the isthmic cases, rupture or abortion usually takes place within the first twelve weeks, and not infrequently during the first month. If interstitial, termination takes place later because of more musculature surrounding it.

The underlying causes of rupture are two, overdilatation and perforation of the tube wall by chorionic villi; and rupture usually takes place at the placental site.

When rupture or abortion takes place into the peritoneal cavity the entire ovum, as a rule, is extruded. If the wound is a small one, there may be profuse hemorrhage without the discharge of the ovum. In either case the hemorrhage is profuse, and the patient will show the marked signs of collapse, and may die before relief is obtained. Sometimes the hemorrhage is so great the woman dies within a few hours. Parry reports 218 cases, of which thirty-nine died within ten; eighty-one within twenty-four, and ninety-nine within forty-eight hours.

If the entire ovum escapes through the tube, its death is inevitable, and unless the fetus is beyond the third month, absorption is the rule.

Rupture between the folds of the broad ligament takes place in a few of the cases, and this is considered the most favorable termination, as far as the mother is concerned.

Fate of the Fetus—As I just stated, when small embryos, especially under three months, are extruded into the peritoneal cavity, absorption of the entire product of conception is the rule. Such a termination is impossible after the fetus has attained a certain size. It then undergoes one of the following changes, viz., mummification, sup-

uration, conversion into a lithopedium, or into adipocere.

Structure—I will refrain, for brevity sake, from going into the histological structure of the product of ectopic gestation, except to say that some differences are found between it and uterine pregnancy.

Symptoms—The symptoms of an early unruptured extrauterine pregnancy are by no means characteristic, and frequently no idea of the condition is had until rupture or abortion takes place, and the patient is in a state of collapse. However there are nearly always a few symptoms present that should suggest the presence of this most alarming condition.

In the beginning the patient will consider that she is starting out on an ordinary uterine pregnancy. Soon after the beginning of the conception there is usually some pain in one or the other ovarian region. Statistics show that the menses persist in about 43 per cent. of the cases, and the woman may not know that she is pregnant. She may attribute her pain to some ovarian trouble; her family physician, to whom she has gone to relate her symptom of pain, may even tell her so, if he does not make a careful examination into the condition, and the real condition is overlooked.

If the fetus dies at an early period; i. e., before rupture or abortion can take place, there will usually be a discharge of blood from the uterus. This may be mistaken for the return of a delayed menstruation, and the real condition overlooked again.

If the woman is a multipara and says that she is pregnant, but does not feel the same as during her other pregnancies, that she has pain in one or the other ovarian regions, has had an occasional flow, either slight or profuse, be sure to examine her most carefully and rule out extrauterine pregnancy before you make a diagnosis of uterine pregnancy. We must not say to that woman, "do not worry about yourself, you will be all right, in some cases the menses persist for two or three months after pregnancy begins," because she may have something that is enough to make both patient and doctor worry. We should examine that woman, examine her very carefully, and if we are not certain about the condition, watch her case closely, see her again and often, until we are certain of the real condition. If we don't, some of us are going to be surprised both disastrously and disgracefully.

If the patient does not give these suggestive symptoms, probably the first symptoms indicating the real condition will be those of collapse when it ruptures or aborts. There will be sharp

lancinating pains followed by collapse as a result of the intraperitoneal hemorrhage, a weak rapid pulse, subnormal temperature, pallor, etc. If the hemorrhage is slight, it is followed by the formation of an hematocele, and a general improvement in the patient's condition.

It might be well to say in this connection that the present opinion is, that by far the majority of pelvic hematoceles are the result of extrauterine pregnancies, which have terminated in a tubal abortion and not a tubal rupture.

Dr. H. J. Lenhoff, of Lincoln, Nebraska, in a very recent paper, describes what he calls a "new diagnostic symptom of ruptured extrauterine pregnancy." "The symptom (to use his own words) is simply a severe sharp cutting pain in the lower abdomen while the patient is at stool, and occurring, as near as can be ascertained, at the time when the abdominal muscles contract in assisting to empty the bowel." The pain, of course, is not new, but its association with the act of defecation is new, and like Dr. Lenhoff, I have not seen any mention of it any place in the literature.

While I was unable to ascertain the presence of this association in any of my cases, Dr. Lenhoff reports it as being present in six of the eight cases he reports.

Diagnosis—The symptoms of an early unruptured ectopic gestation are so scarce and uncertain that they render the diagnosis of this condition one of the most difficult.

The occasional diagnosis of this condition is made upon the following. The patient who has been sterile for some time thinks she is pregnant, having the usual subjective symptoms with an abnormal amount of pain low down in the abdomen, and especially in one or the other ovarian region. You see, *pain* is the striking and suggestive symptom. If a multipara, she will likely complain of feeling different than during her other pregnancies. There is, in about half of the cases, a flow, usually at irregular intervals at or near the menstrual time, though the flow is not as profuse as the menstrual flow.

While a diagnosis cannot be made on these symptoms alone, they should be sufficient to suggest the probability of the condition, and a physical examination will show the uterus to be enlarged, soft and boggy, though not large enough for the length of time the woman says she is pregnant. Off to one side will be a small mass, which will possibly be pulsating, but not always, and this mass is quite apt to be tender to the touch of the examining finger.

If the fetus dies before the tube can rupture or abort itself, the uterus throws off its decidua,

in shreds as a rule, and this must not be mistaken for the return of a delayed menstruation, or a complete or incomplete abortion.

If after rupture or tubal abortion and the patient does not die as a result, the diagnosis can, as a rule, be easily and surely made from the history, and on examination, the finding of a large tumor filling the posterior portion of the pelvis.

Treatment—When ectopic gestation is diagnosed before rupture or abortion, some of the best authorities claim the best way to consider it is the same as a malignant growth and, therefore, remove it at once; also that any method of removing it other than by laparotomy is to be condemned.

On the other hand there are some people who will not consent to this radical procedure upon the grounds that it is barely possible for the fetus to go to full term, or at least to an age of viability, in which case full explanation of the danger should be made to those interested, and the patient and her family made to understand that they must assume all responsibility of the results of waiting. Then the woman should be in a hospital, and under very close observation and the very best of care.

If the diagnosis is not made until the time of rupture or abortion, and this is the time that at least nine-tenths of the diagnosis are made, the abdomen should be immediately opened (unless the patient is in collapse to such an extent that she is practically moribund when first seen) and long clamps passed down into the pelvis and applied on both sides of the mass. This will check all hemorrhage and the injured tube can be excised with care and caution. Stimulants and normal salt solution may then be given as needed.

If the pregnancy is only of two or three month duration, and rupture or tubal abortion takes place with a resultant hematocele, the "watchful waiting" procedure should be given consideration, but the patient must be under very close observation.

It is well known that the majority of these cases undergo spontaneous cure. Thorn reports 157 cases, of which only six were thought necessary to operate, the rest being treated expectantly. In this series of cases the total mortality was only six-tenths of one per cent. Fehling has reported ninety-one cases treated expectantly without a single death. The great disadvantage of this method of treatment of the resultant hematocele is the extreme slowness, the patient having to remain in bed many weeks.

Therefore, the method of treatment of the resultant hematocele is a matter of choice with the attending physician, and in my humble opinion

the misguided product of conception should be removed by laparotomy. This seems to me to be a much quicker, safer and surer method of procedure.

If the expectant method, of treatment, of these cases is followed, the case must be watched very closely, and the indications for operative interference are the rapid increase in the size of the tumor, signs of suppuration, and signs of pressure on important organs. Then the operator must decide whether to go into the abdomen or incise through the posterior vaginal wall, depending upon the signs and symptoms of the case in hand. If there are signs of suppuration, the vaginal route would, I believe, be the one of choice. If there is an increase in the size of the tumor, the route should be through the abdomen where you can see to check the hemorrhage.

If the case goes beyond three months and ruptures or aborts, laparotomy is the only procedure.

Occasionally a case may go to within a short time of viability without rupture or tubal abortion, and a waiting policy may be advised, but the patient must be where you can give her immediate attention, and the family should be advised of the dangers in connection therewith.

Case 1. Mrs. J. R., age fifty, in fairly good health and nutrition, has complained for many years of vague pains and sensations of discomfort in the lower abdomen. Never really confined to the house, in fact she has always attended to her household duties, as well as dances and other social functions.

Family and personal history negative.

Menstrual History—Began at fourteen, always regular and of the twenty-eight and five day type. Married at twenty, and has had two children, who are both living and well. Had one miscarriage about twenty years ago, at what she believes was about four and one-half months, and without any complications in connection with it. Menopause seven years ago. Gonorrhea and syphilis denied. Physical examination shows an indefinite mass behind the uterus, immovable and quite firm. There were other minor abnormalities brought out in the case, but they were irrelevant.

Operation—An exploratory laparotomy was made, which confirmed the physical findings of a mass behind the uterus. The mass was firmly bound by old adhesions to the rectum, uterus and small bowel, and contained well formed parts of a fetus in a calcified state. In removing the mass, a tear was made in the small bowel about three inches in length. This portion of the intestine was resected, but there was evidently a soiling of the peritoneum, as the patient died in due time from peritonitis.

The two salient features in this case are, the mistaken miscarriage, and the comparative ease with which she carried the lithopedium.

Case 2. Mrs. O. T., thirty-nine years of age, says

she thinks she is pregnant about four months, is not sure of the time because she has been flowing at irregular intervals. She is a multipara and has not felt the same as she did during her other pregnancies. She has been having considerable pain in her left side, low down. Three days ago she had sharp lancinating pains in her lower abdomen, which were accompanied by a considerable hemorrhage from her uterus. This hemorrhage contained shreds of what she thought looked like flesh. She says she has consulted different physicians, who told her after making superficial examinations, that she had "liver trouble," "gall-bladder trouble," "ovarian neuralgia," etc., complicating her pregnancy.

Family and personal history negative.

Menstrual history began at thirteen, was always irregular before, but quite regular after marriage. Married at twenty, has had six children, all living and well. One miscarriage about two years ago without any complications following it.

Physical Examination—All organs negative except pelvic. A bimanual examination shows the uterus to be enlarged, boggy, and pushed slightly to the right. Cervix patent about one finger. To the left of, and slightly behind the uterus, is a mass about the size of an orange, which can be outlined as separate from the fundus, there being a notch or depression between the two on top, though apparently connected lower down. There is no pulsation to be determined in the mass. A diagnosis of a ruptured ectopic gestation is made and an operation advised.

Operation—The abdomen was opened and the diagnosis confirmed except that the mass was larger than a grape fruit. There was a small amount of old clotted blood free in the peritoneal cavity, and the mass was firmly adherent to the posterior wall of the uterus and slightly to the small intestines. The tube and ovary on the affected side were almost obliterated in their incorporation in the mass. In removing the mass it ruptured and a perfectly formed dead fetus of about four months escaped. The entire mass was removed and the operation finished in the usual approved manner.

This was a tubal pregnancy which had ruptured between the folds of the broad ligament. The important feature of this case is the presence of the signs and symptoms of ectopic gestation.

The patient made a good recovery after a short siege of pneumonia and a longer siege of phlegmasia alba dolens. In nine months time after her operation she was not only doing her own work in the house, but was helping with the farm work.

Case 3. Mrs. B., age twenty-seven, considers herself pregnant about two months. Has had a few occasional sharp twinges of pain low down in the abdomen, right in the middle, or just above the symphysis. Has had a slight flow once or twice.

The present trouble began suddenly with a sharp severe constant pain in the lower abdomen, beginning on both sides and reaching its maximum intensity in the middle of the lower abdomen. It was bearing down in character, and the patient thought

there must be an abortion impending. There was no sign of hemorrhage or other vaginal discharge.

Physical Examination—The general appearance of the patient was alarming, as all the evidences of shock were present. Vaginal examination shows the cervix not dilated nor very much softened. Posteriorly and to the left of the uterus there is an indefinite mass, but owing to the extreme nervousness of the patient it could not be clinically interpreted at the time. On subsequent examination the same mass was again palpated. It was very tender to the touch of the examining finger. The uterus anteverted and its mobility seemed somewhat impaired.

Family history negative. Previous illness negative.

Menstrual History—Began at about fifteen, always normal and regular as a rule with the exception of a short period at about seventeen when the flow was scanty for a few periods. She has been twice pregnant, the first terminated at about eight months in a stormy attack of eclampsia a year and a half ago. The second pregnancy ended in a spontaneous abortion at about two months about a year ago. The last menstruation occurred July 20, 1915, or seventy days previous to the present illness.

Gonorrhœa and syphilis no evidence.

Clinical Course—At the end of twelve hours after the onset of the present trouble, the patient's condition was somewhat improved, but at the end of forty-eight hours she was again in collapse. The pain was especially severe and difficult to control.

The diagnosis of ruptured ectopic gestation having been made, the increase in the size of the tumor mass with the accentuation of the symptoms, operative measures were decided upon.

Operation—The laparotomy confirmed the diagnosis. The implantation had taken place near the distal end of the left tube, and the tube had aborted itself. There was an enormous quantity of blood free in the abdominal cavity. The entire diseased and adherent mass was removed in the usual manner. The right tube was also diseased, its fimbriated end being in a cystic condition and its walls thickened and indurated. Because of the patient's condition nothing was done with the diseased right tube.

Results—The patient made an unusually rapid recovery.

This case illustrates an indication for surgical interference after the conservative procedure had been begun.

DISEASES OF THE MAXILLARY ANTRUM*

W. H. JOHNSTON, M.D., Muscatine

The Maxillary Sinus is the most constant of the nasal accessory sinuses, only a few cases of its total absence being reported. In embryos eighty-five days old, an outpushing of the mu-

cosa is demonstrable. This outpushing develops as an oblong recess extending into the lateral nasal capsule and maxilla. The point of primary pouching persists as the ostium. In a child eight days old, the diameters of the sinus were: antero-posterior 8.2 mm, lateral 2.8 mm, vertical 3.3 mm. These diameters increase as the maxilla develops, the most rapid development being up to the eighth year. The adult type is reached at about the fifteenth year. After this time the principal change occurs when the third molar tooth erupts, and this causes a descent of the posteroinferior angle. Up to the eighth year the average level of the sinus floor is that of the floor of the nasal fossa. In the adult type the average is from one to five millimeters below the nasal floor. In childhood the general shape of the antrum is ovoid and the adult type is pyramidal, the base being in and the apex extending toward the zygomatic process. At the end of the first year the lateral development of the sinus usually comes in close contact with the intra-orbital nerve. There is a marked variation in the teeth roots which are found in close relation with the sinus floor, the typical, being all the molars and the posterior portion of the second premolar. In some cases only the second and third molars are beneath the floor, and again it may extend over the first premolar, and the root of the canine may extend well up in the anterior wall.

Regardless of irregularities in the floor of the sinus produced by reabsorption of cancellous bone surrounding the roots of the teeth, in no instance is the mucosa lining the sinus found in direct contact with the root of a healthy tooth, a thin layer of bone being present. Where a root abscess has formed however, this bone may be destroyed and allow the root to come in direct contact with the sinus mucosa. (Davis.)

More variations in shape and size are noted in this than in any other of the nasal accessory sinuses; the common variations being abnormally large, abnormally small, double sinuses having separate ostia, and incomplete septa which render drainage quite difficult.

The inner bony wall of the antrum is incomplete, the framework being covered over with mucous membrane. One opening is left in the antero-superior portion of the wall which communicates with the middle meatus through the infundibulum and hiatus semi-lunaris. Thus the maxillary sinus is brought in to close relation with the infundibular cell and the frontals which have their ostia located lateral to the uncinate process. In Davis's series of cases, forty per cent. had the ostia so located. Most accessory ostia open directly into the middle meatus. Ac-

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According to Skillern the normal capacity of the adult antrum is ten to twelve cc in the female, and sixteen to eighteen cc in the male.

It is said that the maxillary sinus is the most frequently diseased of the nasal sinuses. It surely is subject to many pathologic processes.

Maxillary sinusitis, of nasal origin, catarrhal or purulent, acute or chronic.

Maxillary empyema secondary to tooth infections.

Osteomyelitis, occurring in early life and following infectious diseases.

Caries and necrosis following poisoning by mercury or phosphorous.

Foreign bodies, bits of cotton, pieces of broken instruments, teeth, parasites.

Tumors, sarcoma in the young and carcinoma in the old, fibroma and odontoma.

Polyps, hydrops and dentigerous cysts.

Granulomata, syphilis and tuberculosis.

Impacted or inverted teeth.

Caseous degeneration.

Hyperostosis. Periodontitis.

Caries of tooth pulp and root abscesses.

Periostitis and osteitis following tooth abscess.

These are the most important conditions met with but further discussion shall be confined to the conditions that we most frequently find in daily practice, namely, acute and chronic suppurative sinusitis.

The causes may be divided into nasal and dental. Some dental surgeons claim that from fifty to ninety per cent. of all antrum disease is of dental origin. According to Skillern, one case out of five is caused from diseased teeth, the other four being caused by extension from the nasal mucosa or from a neighboring accessory sinus. The chronic type is caused from uncured acute attacks, and gives rise to few symptoms except during exacerbations.

Acute empyema is usually preceded by a severe cold. This is followed by an elevation of temperature; pain over the antrum, and at times over the frontal, usually dull in character and extending into the teeth (one or two teeth seem too long); headache which is greatly intensified by coughing, sneezing, or stooping; tenderness on pressure over the sinus. Any slight jar to the body is felt in the antrum. Unilateral discharge is usually but not always present. Rhinoscopic examination reveals pus in the middle nasal fossa and much redness and swelling of the mucous membrane. Transillumination cannot always be depended on to give any definite information, and should be used only to corroborate other findings. The roentgen ray usually gives reliable information and is especially valuable in locating

dentigerous cysts, impacted teeth and abnormalities in size and shape of the sinus. Catheterization of the ostium is not easily accomplished and is not practical.

Only one method gives us definite information, and that is the exploratory puncture, which is most easily accomplished in the inferior meatus at about the junction of the anterior one-third with the posterior two-thirds of the inferior turbinate. In children under twelve years old it is better to puncture the middle meatus on account of the sinus floor being at a higher level than in the adult type. The operation is rendered painless by the use of cocaine, but as will be seen by the following list of accidents which have occurred, (Kelly) it is not without an element of danger.

Perforation of orbit, swelling of lids and cheek with abscess.

Entrance of air into the jugular vein.

Abscess of canine fossa caused by needle passing through antrum.

Needle may pass into the pterygo-maxillary fossa and air may be forced into the veins here located.

Fatal septicemia supposed to gain entrance by the puncture.

Disturbances of vision.

Cyanosis, dyspnoea, convulsive movements and death.

Convulsions, unconsciousness for thirty-six hours, hemiplegia, death.

In addition to the cases which had grave symptoms following the operation, nine deaths were reported as being directly caused from it. Many explanations have been made as regards the direct cause of death, and most of them seem inadequate.

It is interesting to note that similar accidents occur from antral and pleural puncture.

We draw the following conclusions from the report.

After passing the needle into the antrum, do not force air into it but use a sterile normal saline solution, and even though some of this is forced into the tissues or the circulation, it can do very little harm. In case we find the ostium closed, do not use much force in attempting to force the solution through. A small opening can easily be made in the membranous portion of the antral wall and allow the fluid to escape this way.

If pus is found in the antrum we must next determine the source of infection, whether secondary to frontal or ethmoid disease, or from dental origin. An examination of the teeth should always be made in these cases.

The bacteria usually found are pneumococcus,

streptococcus, staphylococcus, and combinations of the two latter. In Europe the influenza bacillus plays an important part in the etiology of antrum disease.

Treatment—Many acute cases clear up rapidly after irrigation with some mild antiseptic such as saturated solution of boric acid and then filling the antrum with a 2 per cent. solution of argyrol; repeating the operation three or four times at four or five day intervals. If after twelve days pus still remains, more radical treatment should be instituted.

The operations for the cure of sinus disease are almost as numerous as the operators, each using the one that most appeals to him. No matter which procedure we adopt, our object is always the same; drainage, ventilation, easy access to the sinus for lavage. According to statistics, 80 per cent. of the cases of antral suppuration are cured by intra-nasal drainage.

Time prevents a discussion of the various operations. Drainage through the alveolar process should not be encouraged; the antrum is a nasal accessory sinus, developing from the nose, and should be drained into that cavity.

The operation giving us the best results has been a resection of the antral wall in the inferior meatus, removing a very small portion of the anterior end of the inferior turbinate. In some cases it is not necessary to remove any of the turbinate, but simply fracture it and push it toward the septum. A trochar is pushed through the antral wall, and this opening is enlarged by the use of backward and forward cutting forceps and rasps, the opening extending to the extreme anterior limit of the antral wall, backward as far as we desire and down to the floor of the nose. The after treatment can be carried out without much discomfort to the patient, and when necessary the patient can carry out the treatment himself.

In most cases the opening remains patent, after three or four years at least, and the interior of the sinus can be easily examined by the use of the naso-pharyngoscope.

Chronic cases should be given this treatment before resorting to more radical operations because it is surprising the way some of them will clear up. Three cases operated three years ago where the principal symptom was a foul smelling, one-sided discharge, the antrums found partially filled with polypi and foul smelling pus, were examined recently and the sinus found in a normal condition.

Nothing has been said of the various pathologic conditions with which we have to deal, and this must of necessity influence us in our meth-

ods of treatment. Chronic suppuration with osteitis or necrosis of the wall would not get well by the intra-nasal treatment but must be treated radically. The Denker and Caldwell-Luc operations allow inspection of the interior of the sinus so that it may be thoroughly curetted and finally obliterated.

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Discussion

Dr. L. W. Dean, Iowa City—In my experience when we have had to deal with chronic empyema of the antrum of Highmore, in a large percentage of cases I have had to deal also with some lesion of the tooth root as well. The lesion of the tooth root may be the source of the empyema, or it may be the result of it. In our experience at least 60 per cent. of the chronic cases are associated with lesions of the roots of teeth which must be eradicated before we get a cure. In my work I am associated with a good dental surgeon who assists in the diagnosis and treatment of the teeth in every case of chronic empyema. The more common tooth lesions are apical apices. If a tooth is vital it cannot have anything to do with the empyema of the antrum. If the tooth in the neighborhood of the antrum is not vital it is a very suspicious affair and demands attention. Film radiographic plates give excellent information as to whether root canals are properly filled or not, and as to the presence of apical abscesses.

Doctor Rogers, who is associated with me in my work, is inclined to extract more teeth now than formerly, when they are diseased and associated with chronic empyema of the antrum; and I know we have been benefited by the procedure.

Dr. F. R. Roost, Sioux City—In regard to the maxillary sinus in children we must remember that it is situated very high in infants and often the floor will be found at a level with the orbital margin. In some cases orbital abscesses are in this way connected with the maxillary sinus disease. On account of the high position of the antrum in infants an antrum abscess, although exceedingly rare, may break into the orbit. I recall a case of this kind which ran the gamut of a large hospital clinic before the origin of the orbital abscess was discovered.

Dr. I. S. Buzard, Waterloo—One point that has not been sufficiently emphasized in these cases is

that syphilis should be ruled out absolutely as a factor, especially in chronic cases. I have had four cases during the last year; all had been in good hands, and in all complete failure of results had been had because the real factor in each case, syphilis, had been overlooked.

Case 1—Man aged fifty-five, faultless family history, father of five healthy children, wife living and well. Has had a chronic pansinusitis and nasal disease of several years duration. Every procedure taken to relieve condition seemed to aggravate. Wassermann positive. Four treatments neosalvarsan cleaned the disease completely and made a new man of the patient.

Case 2—Male, aged fifty-seven, widower, no children, denied any venereal disease, thoroughly respectable in appearance and well connected. Has had nasal disease for several years, and of late grown very much worse, and complicated by a very severe trifacial neutritis, the pains of which allowed no rest at any time. Before coming into my hands had had a series of intranasal operations to relieve his sinusitis, and preparations were being made to drain the sphenoid sinus as the case was getting desperate. Several attempts were made to inject the trifacial with anesthetic solutions, all of which resulted in complete failure. At this stage of the proceeding the case came into my hands. I could see nothing in it but pansinusitis and nasal and nerve disease, of which syphilis was the real cause. All but three or four of his teeth had been extracted. Wassermann positive. Five neosalvarsan treatments stopped his trouble and cured his nose.

Cases 3 and 4 were not very striking and are not worth detailing unless it be said that the failure in results was due to not recognizing syphilis as the main factor in the case.

Cases 1 and 2 are very valuable from a clinical standpoint, and emphatically emphasize the fact that every nasal disease which exhibits unusual features or intractability, should be subjected to a Wassermann test.

Dr. B. G. Dyer, Ames—Dr. Andrew, of Chicago, formerly practiced this method of blowing discharge out of the antrum with air. In one case reported to me by Dr. Dickson, of Oklahoma, the patient immediately collapsed in the office and died five or six hours later without regaining consciousness. I have no explanation to offer except that of air embolism. I would like to ask whether the other members have noticed an unusual number of sinusitis cases this spring? We have had a number of such cases at Ames along with a lot of "grip" suggesting the inflammation in epidemic form.

Dr. W. H. Johnston, in closing—In this paper I have not tried to discuss the chronic cases, but have had in mind the more acute ones. The treatment for the latter, of course, is not applicable to the chronic type.

No doubt that 60 per cent. of cases of chronic antrum disease are associated with diseased teeth, but I do not think that in this large a percentage the antrum disease is secondary to the diseased tooth.

APPENDICITIS AND GALL-BLADDER INFECTION*

N. SCHILLING, M.D., F.A.C.S., New Hampton

On a number of occasions, while visiting surgical clinics, I have heard this question whispered among spectators: "Why does he remove that normal appendix?"

It is intimated too, that unnecessary appendectomies are sometimes the cause of serious intra-abdominal disease.

Again, it is stated that the appendix is so often guilty that on the slightest evidence or "on general principles" it should be summarily dealt with.

We may answer the question referred to by asking several others; how does the spectator know that the surgeon is removing a normal appendix? Can he always, with the naked eye, differentiate a normal from an abnormal appendix?

According to Aschoff, appendicitis is primarily an intramural, microscopic, inflammatory process and the changes that remain after an uncomplicated acute attack are merely a slight thickening of the subserous and the intra-muscular connective tissue.

Analyzing his cases from a clinical as well as from a pathologic standpoint, Krecke of Munich covers this point comprehensively and, I think, conclusively, when he says:

First—"At appendectomies undertaken during the interval in cases of chronic recurrent appendicitis the appendix may reveal no anatomic alterations whatsoever; neither macroscopic nor microscopic changes are found, and, this in spite of the fact that the symptoms at one or more attacks were decidedly pronounced.

Second—Cases of chronic appendicitis giving no history of a previous acute attack will exhibit pathologic changes in striking contrast to the mild and indefinite character of the clinical manifestations.

Third—While the macroscopic appearance of an appendix may be wholly normal, microscopically it may present the severest lesions.

Fourth—Often the most painstaking examination reveals no pathology in an appendix associated with extensive periappendiceal adhesions.

Fifth—In a large percentage of cases, diagnosed as chronic recurrent appendicitis, appendectomy affords complete and permanent relief even though the pathologic examination has been entirely negative."

These conclusions appear to me sound. At any rate, they serve, once more, to emphasize the

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fact that even in chronic disease of the appendix there is no direct relationship between the extent of the lesions and the severity of the symptoms. Moreover, they certainly show that the clinical status of an appendix cannot be judged by its macroscopic appearance.

It is not my intention to consider seriously the extravagant claims of those surgeons whose numerous patients, after a simple appendectomy, all recover and never get sick again; neither would it serve a useful purpose to dwell at any length on the lugubrious prognostications of the pessimist who intimates that even the incidental removal of an appendix is often fraught with serious consequences, and, who insists that in many instances operations undertaken for the relief of so-called appendiceal dyspeptic symptoms, actually, through trauma and infection, result in the development of cholecystitis and the formation of duodenal or gastric ulcers.

But it may not be wholly unprofitable to inquire whether there exists an etiologic relationship between lesions of the appendix and diseases of the upper abdomen. It is sometimes asserted with some asperity that the appendix question is solved and that further discussion of it is superfluous. This is true, I suppose, so far as the indication in an acute case is concerned. But many phases of its etiology and pathology remain subjects of speculation and controversy. So that the answer to our inquiry by those who are entitled to speak with authority is anything but unanimous. Several years ago, Foxworthy of Indianapolis addressed a "questionnaire" to a number of eminent American clinicians and among the questions he submitted was the following: "Do you find that appendicitis and gall-stone disease are inter-related?" Christopher Graham, John B. Deaver, John Dudley Dunham, Albert J. Ochsner and Robt. T. Morris answered in the affirmative while Max Einhorn, Augustus Caille, the late John H. Musser, Charles M. Fox and Frank Billings answered in the negative.

Dr. Deaver often refers to the upper abdomen as the Balkan region of the abdominal cavity. That this designation is singularly appropriate will become apparent when we contemplate the stormy pathologic scenes that so frequently transpire in the gall-bladder, liver, bile ducts, pancreas, duodenum and the pyloric end of the stomach. Accordingly, our theme should prove exciting even if our inquiry does not presume to consider except incidentally the diseases so prevalent in this storm center of pathology.

McCarty of the Mayo Clinic makes the timely and important observation, that the organs referred to should "not be functionally separated

by arbitrary anatomic boundaries." He contends that they should be studied "correlatively" and he sums up his opinion on this point by stating that "the gall-bladder, liver, duodenum, pancreas and stomach are embryologically, anatomically, physiologically and pathologically closely related and that they should be considered as a gastro—duodeno—hepatico—pancreatic physiologic system."

The same author inclines to the belief that "the appendix may reflexly cause disturbances in the stomach and duodenum, which in turn disturb the mechanism of secretion, storage and outflow of the bile, thereby producing conditions favorable for bacterial infection." In fact, his elucidations on the affirmative side of our question are so plausible that one wonders why there is not a greater unanimity of opinion.

LaRoque, of Richmond, Virginia, has thoroughly reviewed the whole subject and states that "pyloritis, pyloric ulcer, bile tract infection, pancreatitis and perhaps cirrhosis of the liver are the late results of infection, primarily located, most commonly in the appendix, though in many cases in some other region drained by the portal vein. Along this route the bacteria are brought to the liver and after having been filtered through that organ they are eliminated in the bile and deposited in the proximal duodenum."

Among the most scholarly contributions to this subject are those of the great French clinician, Dieulafoy. His enormous experience supports the view that appendicitis and cholecystitis are frequently associated, but, altogether contrary to the generally accepted notion,—he contends that the gall-bladder infection is the primary one. "Question, he says, your patients with care and you will find that your case of acute appendicitis has had in the right hypochondriac region, previous, and very likely repeated attacks of colic accompanied by a yellowish tint of the skin. In other words, he has had hepatic colic, practically, a pathognomonic manifestation of cholecystitis. In almost every instance symptoms of the biliary lesion open the scene while the appendicitis is secondary and appears days, weeks, months or even years later."

At first, this view appeared to me absurd. But the lesson that it is always worth while to heed the admonitions of a master was again brought home to me rather impressively. For just at this time the following case came under my observation. It occurred in the practice of Dr. A. D. McKinley of Lawler, Iowa. On the evening of April 15, 1915, E. C., a farmer, fifty-one years of age, was taken suddenly with severe pain in the abdomen. His suffering was so intense that small doses of morphine were reluctantly ad-

ministered. When I saw him twenty-four hours later, his general appearance was that of a man extremely ill. Moreover, he exemplified beautifully the plethoric obese type of individual. With the exception of an entire absence of nausea and vomiting, he exhibited the classical manifestations of severe acute appendicitis with coincident localized peritonitis. The pulse which is ordinarily forty-five was increased in frequency to fifty-eight. The temperature was 101.2. There was constipation, some abdominal distention and much belching of gas. The tenderness and muscular rigidity were extreme but limited quite distinctly to the lower right quadrant of the abdomen. Even on deep pressure no tenderness could be elicited in the region of the gall-bladder. At the appendectomy undertaken the next morning the clinical diagnosis was practically confirmed. For obvious reasons, the general abdominal cavity was not explored. The appendix was removed and a large drainage tube inserted. As to the necessity of the latter procedure we were in doubt. But the rather profuse drainage subsequently, I think, justified this precaution. So far as the gross pathology of the condition was concerned, the only thing that surprised us at all was the dense and the extensive character of the periappendiceal adhesions.

But the clinical history, especially when viewed from the standpoint of Dieulafoy, is the interesting feature of this case. For thirty years this man has been subject to "spells of biliousness." They have varied in intensity from flatulence and belching of gas to severe recurrent attacks of pain beginning in the right hypochondrium and radiating toward the back and right shoulder. He gives a clear cut history of clay colored stools and of varying degrees of jaundice during some of these attacks. Five years ago the jaundice continued for six weeks. At the same time the urine was a deep brown and the stools a light clay color. It should be mentioned too, that the clinical history is very explicit on the circumstance that the present severe acute appendicitis was preceded by only two similar but milder attacks and that they supervened at a date comparatively recent.

In the light of such a history, it is difficult to escape the conviction that in this instance, at least, cholecystitis with common duct obstruction antedated the appendiceal infection. While we are not justified in drawing general conclusions from the study of a single clinical history, we are bound not to disregard its lesson when it is in accord with the teaching of so keen an observer as the author mentioned. Accordingly, in cases of appendicitis it should prove interesting and

possibly illuminating not only to look for a co-existing cholecystitis but to determine, if possible, whether the appendiceal or the biliary tract infection is the primary one.

It is true that the brilliant researches of Rose now promise to revolutionize our conception of the etiology and pathogenesis, both of appendicitis and of cholecystitis. But so far as I know, his conclusions have not been confirmed by other observers. So that at this time an estimate of their significance would be premature.

And I am confident that when the final chapter on this question shall have been written, the teaching of the great Dieulafoy will not have been entirely ignored. At any rate, I shall venture to present it for your consideration. Briefly stated, it is as follows: extensive adhesions and other evidences of pericholecystitis are proof of the fact that cholecystitis, calculous and non-calculous, sometimes constitutes a focus of infection of great intensity. Only micro-organisms of great virulence could produce the changes that are sometimes seen in the neighborhood of an infected gall-bladder. By way of the biliary ducts these virulent agents are poured into the duodenum. So long as they remain free in the small intestine no untoward results will follow but if in their varied peregrinations they should become confined in a cavity comparatively closed like the appendix, favorable conditions for their pathogenic activity prevail and appendicitis with all its possible consequences may ensue. It is in this way that infectious cholecystitis may continue for a long time with symptoms sometimes mild, sometimes violent until one day appendicitis supervenes. It will be acute or subacute, mild or fulminant and followed more or less extensively by the complications incident to this disease.

If we may presume to draw any practical lessons from the foregoing fragmentary observations they are the following:

First—Even the palpating finger of the surgeon cannot always determine whether the appendix is normal or not. So that the opinion, often expressed with so much assurance by the casual onlooker, is wholly immaterial.

Second—It follows, therefore, that whenever the abdomen is opened for any purpose whatever, the appendix should be removed.

Third—The etiology and pathogenesis of appendicitis, cholecystitis, duodenal and gastric ulcer has not been conclusively determined.

Fourth—There exists an etiologic relationship between appendicitis and other intra-abdominal diseases. Therefore, to analyze each case as a whole and to view it from every angle is a present day tendency that is to be commended.

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Discussion

Dr. C. F. Wahrer, Fort Madison—It is no laughing matter, when you have a case of appendicitis on your hands. And when talking about synchronous affections in the abdomen when we have an appendicitis, I was wondering whether the appendix is always the primary sinner, or whether something else was the offender. The appendix is a coward and will squeal first upon all occasions, but "This is the one that causes the trouble," is all you hear. We have had enough of cases of appendicitis in which later on we have found that some other condition was the principal cause of trouble, the most common of which is biliary trouble, or gall-stones.

It is a question what causes appendicitis and what causes gall-stones, although the question is very easily answered by that broad word **infection**. Well, what was the infective focus in the first place? We know very well that following typhoid fever and what not, something else provokes these infections to become localized, and even sometimes the appendix is the organ that catches the whole infection, and sometimes the liver will catch some. But I believe it is the appendix that squeals first. However, when you look, you sometimes find gall-stones in the gall-bladder while operating for an appendicitis. We recently operated on a man with that trouble, and while we did not feel justified in finishing both operations at the same time, we removed the appendix and told the patient that as soon as he was well enough we would operate on his liver.

We have operated on several appendiceal cases, and later on the patient comes back with the same kind of pain. In two cases we removed the pericolic membrane and these patients have had rest ever since, and, by the way, they are alive. When the surgeon removes an appendix or goes into the abdomen for the benefit of the appendix, in every case he is justified in looking around for the purpose of determining whether there are any other lesions, for, while not always, in a large per cent. of cases you will find other lesions present, and it is best to

give your patient the benefit of your finding, when you may operate, if you feel justified, at the same time, or at a later date. The removal of an appendix that is ordinarily inflamed, the sort that Dr. Reed was kind enough to call a catarrhal appendix, is a simple matter, not much more than unbuttoning the patient's underclothes and buttoning them up again. But when infection has gone on to other members, like, for instance, the gall-tract, the pancreatic region, and so on, it may be more difficult to handle than most of us are willing to admit.

But the point I wish to make is that we find numerous co-existing lesions besides the one that I said a little while ago would squeal first. Be sure you find the main sinner in the case.

Dr. L. W. Littig, Davenport—I always insisted that Dr. Wahrer is a very useful member of this Society, because he does stir up the animals just when a little ginger is needed.

I desire to mention a recent publication by Dr. Rosenow, in which it is stated that the appendicitis is in most cases hæmatogenous in origin, and that the primary focus is, in many cases, in the tonsils. There is no question but a number of cases of appendicitis frequently occur simultaneously, a sort of an epidemic. And Dr. Rosenow's findings serve as an explanation as to why cases of appendicitis are common at certain times. And inasmuch as appendicitis is often hæmatogenous in origin, why should not some of the microbes lodge in the gall-bladder, as well as in the appendix? It seems to me the relation between the two is not hard to understand.

I want to object to the statement that appendiceal operation is exceedingly simple. The number of cases of appendicitis that are operated, and that do not enjoy perfect health afterwards, is surprisingly large, and sometimes when we have occasion to open an abdomen that has previously been opened by somebody else, it is surprising to see the number of adhesions that are present. The great question that confronts us is how to avoid these unpleasant results, because they occur in our work as well as in the work of others.

I am a little surprised that the essayist gave his suspected case of appendicitis morphin, and, if I understood correctly, did not see his patient again for twenty-four hours. Under no circumstances should the patient in whom we suspect appendicitis, be given morphia unless the pain is terrifically severe. But when pain is severe enough to require morphia the patient ought to be seen again within two or three hours. More than one dose of morphia, should not be given because it is necessary to make a positive diagnosis in the shortest possible time. To give morphia and then not see the patient until twenty-four hours have elapsed, seems to me rather an unusual practice.

Dr. C. T. Maxwell, Sioux City—I do not think this subject should be passed over without mentioning the complication of a Lane's kink in chronic appendicitis. Lane's kink may or may not be an

anomaly of development. Judging from the cases that I have seen, this complication occurs in at least one-third of the chronic cases of appendicitis in adults. I have never seen Lane's kink in a person under fifteen. The youngest case in which I have seen a well marked Lane's kink was that of a girl of about eighteen, who had had appendiceal trouble with more or less definite history for several years. And I would like to ask the surgeons present if they have ever seen this condition in a primary attack, or have seen it in a very young person; in other words, is it a complication of appendicitis, or is it a development anomaly.

Dr. A. J. Farnham, Traer—Referring to what Dr. Wahrer said in relation to the appendix being the first to squeal; I believe it is another organ that squeals first, the one mentioned by Dr. Littig—the tonsil. The tonsils and the teeth are very prolific causes of these infections in the lower abdomen, and next in the train comes the gall-bladder. Therefore I think we should always investigate the teeth and tonsils, also the sinuses and ears, for chronic infection before attempting to remove a diseased appendix, because sooner or later the infection present will set up cholecystitis.

Dr. Paul E. Gardner, New Hampton—I want to compliment the essayist on the paper, and also refer to another phase of appendicitis that has not been mentioned, and that is diverticulitis. On one occasion we operated for appendicitis and took out two appendices, and at that time the real primary cause of the trouble was not appendicitis at all, although it had been formerly because there was evidence of trouble in the appendix; but the real trouble at the time we operated was diverticulitis of Meckel's diverticulum.

Dr. Schilling—I desire to thank Dr. Wahrer and others who have discussed this paper.

The work of Rosenow I have, of course, followed with a great deal of interest. At the same time his observations have not, so far as I know, been confirmed by other observers, and I do not think that he himself, even, has arrived at any positive conclusions regarding the matter. So I merely mentioned them, stating that eventually they would probably revolutionize our conceptions of these conditions.

The reason I emphasized the point made by the eminent Frenchman Dieulafoy, is this: When we get taken up with an idea, we are so apt to ignore the findings of other investigators, and for that reason I emphasized the work of this great clinician. After all, the case that I cited would emphasize really the opinion of Dieulafoy, as mentioned in my paper.

Another thing that I am surprised to find is that there should be any real lack of unanimity on the question of whether the gall-bladder infection is the primary focus, or whether the appendiceal infection is the primary focus. I suppose the truth is that in some instances it is the one and in other instances, the other. I believe, too, that the appendix is probably the more often the primary focus. At

the same time when a great clinician like Dieulafoy tells us that according to his enormous experience the gall-bladder is the primary focus, we must pay some attention to the statement, and the case cited illustrates that point.

In regard to the administration of morphia in these cases of acute, severe abdominal pain, Dr. Littig, may, of course, be fortunate that he lives in Davenport, where probably he does not come in contact with very many excitable people of Celtic origin. When in such a community we get into a household with all the relations and neighbors standing around, with the patient crying and complaining of excruciating pain, we sometimes have to sacrifice scientific principles to present expediencies. I mentioned in my paper that the small dose of morphia was given reluctantly, but that circumstances almost compelled us to do it.

STRYCHNINE, MISCALLED STIMULANT; AN EXAMPLE OF THE DANGEROUS MISUSE OF WORDS

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AND

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Definitions are supposed to define, mark, or fix limitations as regards matters defined. Usually they comply with this requirement. In some instances, however, confusion has resulted from attempts to define, or from what may be considered as unfortunate misuse of names, or terms. A case in point, which we venture to suggest, is the commonly accepted definition of strychnine as a "stimulant."

With few exceptions, so few as to make them practically negligible, text-book writers upon the subject of materia medica and pharmacology, and most writers upon practice of medicine use this term in suggestions as to the therapy of strychnine. For some reason, unexplained thus far however, they discuss this important drug as regards its pharmacology from a very different viewpoint in contra-distinction to their subsequent discussion of its therapy. For instance, it is generally admitted that atropine, cocaine, and caffeine are true stimulants, resembling somewhat electrical and purely physiological stimuli. These are agencies pure and simple which are likely to do just what they per se are expected to do, namely, "quicken or increase some functional process." Certain antagonizing principles bring about precisely opposite conditions, which are defined as "depressants." Strychnine based upon its pharmacology, however, can not properly be

classed with either of these groups. Its function, so far as known, is purely one of "sensitization" of areas found chiefly in the cord.

Thus "charged," these areas, without a stimulus to "set them off," would be little better than a loaded gun without its percussion material to activate for purpose of explosion, or the sensitized film of a kodak in absence of light. Strychnine should be defined, then, and treated as a pure "sensitizer," and not at all as a stimulant as so commonly called and understood by the general practitioner. The writers have neither the desire nor purpose to merely quibble about words. By large numbers this drug is used with the thought uppermost in mind, that it has been, and is yet, the most vigorous stimulant we possess. To oppose this view, because of its vital import to patients who must "try it out," is the purpose of this paper. Since beginning its preparation, indeed, there has appeared in the Journal of the A. M. A., a paper entitled, "The Use of Words,"¹ which supports our contention strongly. That article, it is true, deals more directly with the use of words as applied to nosology, rather than physiology. It none the less contributes to the contentions of this paper in its stand for greater accuracy in definition. If a name is to be of value because of its descriptive significance, then all the greater the need of care in selecting names that might suggest dangerous therapy. Possibly one ought not to separate too sharply the difference between strychnine and other so-called drug stimulants, because the mode of action is probably more or less similar, and probably more so from the standpoint of increasing irritability. But as this is only a possibility, and as strychnine has been definitely shown to produce its action in this way, we are using it as an example.

Let the matter be considered, first, in the light of observations that any practitioner may easily note. Suppose, a severe toxemia is to be treated, such as results so often in diphtheria, pneumonia, typhoid fever, etc. Toxins developing in the blood quickly disclose their presence by profound prostrations. The circulation and respiration soon respond to their depressant effects, and functions of a most vital type are lowered. Support is now strongly and quickly needed. It is usually supplied by stimulants, among which, too frequently, is included the important drug under consideration. Little harm may occur if the prescriber, with the thought merely of full measure, happens to have happily combined with this powerful therapeutic ally some real stimulant. Otherwise, if he has unhappily restricted his pre-

scription to strychnine alone, the practitioner's intent might react fatally. It might, and no doubt often does, render a vital center, such as the respiratory in pneumonia, much more susceptible to the depressant toxins, than to its normal stimuli. Strychnine increases the irritability of the central nervous system to influences—pathological or physiological—and the former often overshadow the latter as a result. Here lurks the real danger. A contribution by way of atropine or caffeine might mightily have helped on the work made so imperative by the air-hunger present, for example, in pneumonia whether due to acidosis or other causes.² In no other way, seemingly, could it have been so well satisfied. Where it is all too apparent that the pathological situation will be advanced by strychnine, then the caution sign is used. For example, "when the paralysis is due to an inflammatory process, strychnine is to be used with the greatest care, or is perhaps better avoided entirely as long as the irritation is present, as it seems to increase and prolong the inflammation when used early in these cases."³

It will surprise busy practitioners, as we have said, to learn that many pharmacologists contradict themselves when comparing the therapeutic indications of this drug with their discussion of its pharmacology. They practically refute their own conclusions in their summation of its important actions. For instance, so well known and admittedly eminent an authority as Cushny,⁴ in his article upon strychnine declares as follows: "Besides the spinal cord, all other regions in which simple reflexes can be produced, are affected by strychnine. Thus the medullary centers are thrown into the same condition, and their responses to stimuli are equally exaggerated; *but they are in constant receipt of impulses, and strychnine, by increasing the efficiency of these augments the tone of the medulla oblongata, when it is given in small quantities.*" (The italics are the writers'). Again, "the stimulation (terminology disputed by the writers) of the spinal cord by strychnine, etc.," is a statement made by the same author. Thus practically the entire argument first submitted by Cushny, in favor of an increase in irritability of the cord so that impulses or stimuli are more efficient, is seemingly contradicted by declaring the drug a stimulant also *to these very areas*. Does strychnine make stimuli more efficient, and at the same time itself act as a stimulus? And yet, despite the strong logic found in his presentation of this drug's pharmacological action, supportive of the contention of this article, he advises the practitioner under the

1. McCrae, Thos., Philadelphia, The Journal A. M. A., July 10, 1915, p. 135.

2. Lewis, Th. Lectures on the Heart, 1915.

3. Cushny, A. R., Pharmacology, New Edition, p. 275, 276.

4. Cushny, *ibid.*, p. 272.

caption, Therapeutic Uses, to use it as a "respiratory stimulant," (unsupported by some *real* stimulant). Cushny⁵ does state that "In weakness of the circulation from inefficiency of the vasomotor center it may act, though Crile denies it any value in the treatment of the low blood pressure of shock, and Cabot⁶ could not find any change in the blood pressure after its use in a number of conditions in which it is ordinarily advised. Cook and Briggs found the blood-pressure increased in certain cases of vasomotor paresis, however, when 1/60-1/10 gr. of strychnine was injected hypodermically. In rare cases this weakness of the medullary center simulates heart disease, and this may account for the belief in the virtues of strychnine as a cardiac tonic." Edsall and Means,⁷ in summarizing on the same points, state, "Strychnine—No action on the respiratory center or circulation, possibly an increase in metabolism." Parkinson and Rowlands⁸ declare of strychnine in failing heart action, that doses of gr. 1/15 of the sulphate administered hypodermically, "produced no effect upon the heart and circulation, within an hour after administration." Sollmann⁹ declares, "This clinical term, 'cardiac stimulant,' does not necessarily imply that the drug stimulates the heart directly; but merely that it improves the pulse. (The expression is used so loosely, that the student is advised to discard it altogether.) In the case of strychnine, this would be an indirect result of the rise of blood-pressure, if it occurred at all. In view of the practically negative results of all exact methods of observation, the claimed beneficial effect of ordinary doses of strychnine on the circulation must be considered as not proven." He concludes, "On the whole, strychnine must be looked upon as a temporary remedy." * * * (It does not) "increase any of its central nervous system functions except its irritability." * * * "Its temporary action in bridging over the time required for reparative processes renders it extremely useful."¹⁰ To this might be added the qualification named as the chief point of this article; but to do this most effectively it should be accompanied by some stimulus, such as the reflex effect of rest, or by some one of a few important admittedly true stimulant drugs, such as atropine, cocaine, caffeine, digitalis, etc., Hirschfelder¹¹ "has made a considerable number of ob-

servations, determining the blood-pressure with the Erlanger apparatus. He "injected strychnine in doses which rose to 15 mg. (1/4 gr.) hypo. without obtaining any effect upon maximal or minimal pressure, pulse-rate, or rate of respiration, and from single doses scarcely any increase in reflexes. These tests were made upon hearts which were not dilated, and hence no effects upon tonicity could be noted." We call attention below to the fact that the word "tonicity" implies that a reflex mechanism is concerned, so that the results of Cameron¹² on cardiac tonicity are interpretable from that standpoint. In a footnote, Hirschfelder¹¹ says, "In view of the wide use of strychnine in heart diseases in English speaking countries, it is quite striking that this drug is not mentioned in connection with therapy of the circulatory system in such extensive German textbooks as those of Romberg and Heinz." Wiggers noted before the American Society of Pharmacologists, Dec. 27, 1915, that strychnine in therapeutic doses has no effect upon the heart, in experiments with his apparatus. In citing Pilcher and Sollmann,¹³ may we first call attention to the fact that the effect of strychnine as stated by them depends upon the presence of a stimulus (for example, the oxygen percentage in the blood); "The extensive clinical use of strychnine as a 'cardiac stimulant' is not based on adequate clinical or experimental evidence. It is well known that therapeutic doses of strychnine have no direct effect on the heart, nor do they produce any marked or constant effect on the blood pressure of man or of animals. There is no action on the blood vessels directly. The following results show that the vasomotor center may either be unaffected or slightly stimulated by non-convulsive doses. *The response depends greatly upon the oxygenation of the blood,*" (italics ours).

Bastedo¹⁴ emphasizes the point that "*Strychnine heightens tone by increasing reflex excitability*, (the italics are his), and on this property most of the therapeutic usefulness of the drug depends." No allusion is made here about its being a stimulant. By implication, at least, he declares it to be purely a "sensitizer" of the centers in the cord. Nowhere does he direct its use in so many instances where practitioners are now daily using it. He properly declares, "It is the best of our genuine tonics." With this view all can agree, if we use the term *tonic*, with its physiological meaning only in mind. There is no organ in the body, particularly in its normal state, it seems to us, that is not made to do better work by the use

5. Cushny, *ibid.*, p. 276.

6. Cabot, R. C., J. A. M. A., 1904, Vol. xlii, p. 1378, Am. Med., viii, 31.

7. Edsall and Means, Archives of Int. Medic., Vol. xiv, 1914 pp. 897-910. See also Higgins and Means, J. Pharm. Exp. Thera., Vol. vii, p. 29.

8. Parkinson and Rowlands, (London) Lancet, Sept. 13, 1913, p. 810.

9. Sollmann, Torald, Pharmacology, p. 148.

10. Sollmann, *ibid.*, p. 160.

11. Hirschfelder, A. D., Diseases of the Heart and Aorta, p. 250.

12. Cameron, A. D., *ibid.*, Diseases of the Heart and Aorta, p. 250f.

13. Pilcher and Sollmann, Jour. of Pharmacology and Experimental Therapeutics, Vol. vi, p. 331, Jan., 1915.

14. Bastedo, W. A., Mat. Med. Pharm., p. 260, 259.

of strychnine, that is, whose function is not perceptibly and helpfully enhanced if it makes up an essential constituent in a reflex mechanism. Bastedo,¹⁴ at another place, correctly remarks, italicizing again, no doubt, for emphasis, "*Strychnine increases reflex activity by facilitating the passage of afferent impulses in the cord (across and up and down the cord).*" "It may directly 'stimulate' the motor cells themselves, *but this is not proved.*" The last sentence suggests its author may possibly have had in mind the same distinction between sensitization and stimulation as ourselves. May we venture to suggest that the above running comment in discrediting also the use of strychnine as a stimulant for specific organs and centers, emphasizes the fact that the most obvious resultant after a drug's use need not necessarily be its primary or incipient result. Cannon and his fellow workers, in tracing the production of emotional glycosuria, correlated the essential observations with the essential analysis.

A notable action of the drug is one in which the so-called "threshold value" in the cord is greatly lowered. Referring to the effect of the drug upon muscle tonus, Sollmann¹⁵ infers a lowering of the "threshold value," "heightening the reflex excitability of the spinal cord. Spinal centers are put in a condition more favorable to reflexes. It is in this way that strychnine is useful in *impotence* or in *paralysis of the bladder or other sphincters*, when these are due to lowered activity of their respective spinal centers." Note expression "lowered activity." The obvious conclusion is that the drug makes possible only a higher activity of such centers, not by stimulating, but by *permitting* stimuli somehow to be more effective. Baglioni, Claude Bernard, and Poulsson's classic experiments all seem to confirm this hypothesis. The possibility of strychnine acting as a direct stimulus, sensory or motor, seems to be reasonably impossible, based upon their actual or inferred conclusions. Herman Meyer, as long ago as 1846 proved this to be true. With reference to this point, Meyer and Gottlieb¹⁶ declare (1914) "after very small doses of the drug, 1/50 to 1/100 mg., *the simple avoidance of all stimulation, or other irritation,*" (italics are the writers') is sufficient to prevent the outbreak of convulsions. It is thus clear that the central reflex mechanism has been rendered immensely more sensitive to normal physiological (or any other, writers' suggestion) stimuli and that a direct stimulation of the motor ganglia in the anterior horns is not produced by the drug."

We have noticed in our own experiments on

frogs (given maximal doses) that there is a difference in time in which a frog which is isolated from the rest will begin to have convulsions as compared with the frog which is put back with the rest. In the former, the organic intrinsic sensations only gradually summate to overwhelm the nervous system. In the latter case, there is added to the bombardment of organic (intrinsic) stimuli, the external (extrinsic) stimuli or irritations produced by the other frogs. This increased activity of the receptive apparatus increases the energy and activity of the nervous system, and therefore makes the strychnine more quickly effective. After a certain interval, "a very slight or even imperceptible stimulus is enough to induce them."¹⁷ See Binz below. Meyer and Gottlieb¹⁸ in grouping stimulants of the respiratory

17. Cushny, *ibid.*, p. 269.

center, naming atropin, camphor, caffeine, cocaine, strychnine, etc., state that, "for practical purposes, only camphor, caffeine and atropine need be considered." No reason is given for omitting strychnine.

Strychnine is often prescribed to produce a supposedly direct effect upon the stomach, but there is evidence that it does not do so. "Bitters do not directly favor absorption from the stomach."¹⁹ Carlson and his fellow workers state, "We are inclined to believe that all of the numerous bitters used in therapeutics are without direct action (that is from the stomach) on the hunger mechanism when used in therapeutic quantities."²⁰ Whatever effect the bitters have on appetite, is apparently psychic.

Attention may have been attracted by the statements cited at various points above that strychnine may possibly produce its effect by stimulating the motor cells themselves. Invariably these statements contain in themselves the emphasis that this is a point which has not been proven, and which has been to a certain extent refuted by a number of authors. Meyer and Gottlieb²¹ give special attention to this subject and explain the results that Sherrington²² obtained (convulsions produced by strychnine in a spinal dog with the posterior spinal nerve-roots cut) by the fact that the independent "relay cells" (Schaltzellen, Exner's a-cells) with their continuations remain unaffected. "These cells accordingly must be able to receive chemical stimuli from the blood or mechanical ones resulting from vibration and to co-ordinate and transmit them to the cells in the anterior horns." Binz declares, "With large

18. Meyer and Gottlieb, *ibid.*, p. 335.

19. Meyer and Gottlieb, *ibid.*, p. 173.

20. Carlson, Van de Erve, Lewis and Orr, *J. Pharm. and Exp. Therap.* p. 209, 213.

21. Meyer & Gottlieb, *ibid.*, p. 14 and 15.

22. Sherrington, *Philos. Trans. Roy. Soc.*, 1898, Vol. 190, p. 160.

15. Sollmann, *ibid.*, p. 147.

16. Meyer and Gottlieb.

doses—the normal processes in the cells are sufficient to produce general convulsions.”²³ Cushny cites the work of Ryan, McGuigan, and Becht, Barenne, in their statements that the drug stimulates the anterior horn cells, and still says “there are strong grounds for the belief that the cells of the anterior horns are not necessarily involved in the strychnine action.” “The subject requires further investigation.”²⁴

In Sherrington's preparation there may have been a number of possibilities by which it seems to us the nervous apparatus could have been affected. Each nerve cell is increased in its excitability by the strychnine and as a result one can suppose that very slight stimuli or disturbances would have been sufficient to produce a convulsion as stated above. It is true that the motor apparatus is intact in such a preparation, and it is further true that it is an “accepted belief in physiology that any nerve fiber may conduct an impulse in both directions.”²⁵ It may be possible that axon reflexes may be present in such a preparation (which is certainly not *normal*), and the reverberations from peripheral ganglia may be sufficient to carry stimuli up the motor apparatus to the cord. This possibility may be borne out by the fact that the nerves are extremely irritable, and that this latter phenomenon makes possible the Rheoscopic preparation. Still further, one may suppose that all the demarcation currents arising when the posterior nerve-roots are cut might sum up and produce an appreciable stimulation sufficient for the first convulsion, which could then be the well-spring whence all succeeding convulsions might have their origin. A further possibility could be the fact that paradoxical contractions might be produced by electrotonic currents,²⁶ merely by handling the preparation. The foregoing, therefore, seem to be a number of facts which could cause the initial convulsion, casting doubt upon the assumption that there is a direct stimulation by strychnine of the anterior horn cells after the posterior nerve-roots are cut, without any stimuli being present at all.

In regard to Sherrington's view on the action of strychnine in reciprocal inhibition, we are unable to infer from his discussion and description that the action of strychnine can in any sense be regarded as one of stimulation, but that it, in some unknown way, interferes with the mechanism of reciprocal innervation. “A small dose of

strychnine at once transmutes the inhibitory effect into an excitation effect.” It is true Sherrington further observes that, “this phenomenon shows well how little competent is the view of lowered spinal resistance to really explain the action of strychnine;” but he later makes a statement only of fact as follows, “The observations, as they stand at present, incline me to the inference that the action of the alkaloid is to convert in the spinal cord the process of inhibition—whatever that may essentially be—into the process of excitation—whatever that may essentially be.”²⁷ The whole matter is hypothetical, because the mechanism of inhibition itself is hypothesis, and any influence as to increase or decrease of resistance to an inhibitory influence is therefore in a purely nebulous state. Sherrington²⁸ returned to the problem in 1911, and concluded after presenting two possibilities that, “at present the evidence does not appear decisive either way. The question seems hardly ripe for fruitful discussion now.” Bayliss says, “The whole question as to the mechanism of these various reversal phenomena cannot be said to be capable of decision as yet.”²⁹

Additional proof could be cited to establish the chief contention of this article, viz., that strychnine unsupported by unquestioned, specific, selective stimulants in pathological situations, merits condemnation, and that its supposed unaided supportive action might be positively dangerous.

THE INTRA-NASAL TREATMENT OF FRONTAL SINUS DISEASE*

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In the treatment of endo-nasal lesions, one must ever remember that he is dealing with one of the most important functioning organs of the body for which a thorough knowledge of the anatomy and physiology is most essential to obtain the maximum results in treatment, whether that be medical or surgical.

Among the eminent rhinologists of today, a very conservative aspect is taken in regard to treatment of the frontal sinus disease. By that I mean they are only performing the radical frontal in the most obstinate cases as when the necrosis is very extensive. Such men as Ingals and Freer¹ of Chicago; Max Halle³ of Berlin; L. Vacher² of Paris; Hajek⁴ of Vienna; P. Watson

23. Binz, Lec. on Pharm. Vol. i, p. 303, citing Freusberg.

24. Cushny, *ibid.*, p. 271.

25. Howell, Physiology, p. 113, 103, 151. Stewart, (25). p. 765f.

26. Stewart, Manual of Physiology, 7th Ed., p. 816.

27. Sherrington, 1906, Integrative Action of the Nervous System, pp. 109, 111.

28. Owen and Sherrington, 1911, Journal of Physiology, Vol. 43, pp. 240, 241.

29. Wm. Bayliss, 1915, Princ. of General Physiology, p. 429.

1. Freer—Reprint from Chicago Med. Society, March, 1915.

2. Vacher — Bulletin d. Otologie, Rhinology-Laryngology, Tome. xiv, opr., 1911.

3. Halle—Archiv fur Laryngologie and Rhinologie Bd. 24 Heft 2., 1911.

4. Hajek—From Vienna lectures on Frontal Sinus.

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Williams⁵ of London and H. P. Mosher⁶ of Boston, are developing the intra-nasal route to the frontal sinus.

In a normal nasal chamber there is a proper drainage and ventilation of all the sinuses. It is a well known fact that a cavity lined with mucous membrane is predisposed to infection and inflammation when its drainage and ventilation are impaired. The removal of the existing obstruction will consequently raise the resistance of the tissues, and the early disappearance of the infection and inflammation will occur.

The acute cases show usually an involvement of the frontal alone, while the sub-acute and chronic forms will invariably have found entrance into the ethmoids and possibly the antrum and sphenoid. The more chronic the nature of the disease, the more sinuses are involved. A large percentage of these chronic cases would be lessened if the proper care and treatment had been administered while in their acute and sub-acute forms.

There are many cases where the necrosis is so extensive that the external route is clearly indicated if the patient is in the proper general health to withstand the same.

The etiological and pathological factors should be determined before considering the treatment. Cultures and smears aid in determining the character of the infection present. The pathological conditions are practically the same as those of any other region, except as pointed out by Kyle⁷, the changes occur more rapid. The investigations by Beck⁸ on the histo-pathology of this region are worthy to note in passing.

The usual cause of sinus disease is a deformed middle turbinate associated with a septal deviation to that side, an enlarged ethmoid bulla, or the uncinate process may crowd in up on the naso-frontal duct. Super-imposed on these structural deformities are the changes due to infection occurring in the nasal mucosa which turn the naturally open sinuses into closed infected cavities.

It is also necessary to determine whether one is dealing with a purely acute condition or an acute exacerbation of a chronic inflammation.

The question of diagnosis should appeal strongly to the general practitioner while that of the treatment more to the specialist. Frontal sinus disease should be diagnosed early to obtain the best results. These cases usually complain of an early morning headache and a history

of a discharge from the nose. Pain is worse on stooping over. The middle turbinate is hypertrophied, glazed, and has a velvety touch, the whole pressing against a deviated septum to that side. In some cases the hiatus semilunaris is completely blocked by an enlarged bulla ethmoidalis.

Good, clear radiograms with their proper interpretation, are most valuable aids not alone in determining the existence of disease but they show us the size, shape and position of these cavities. The exhaustive investigations of Killian⁹ have shown the value of the X-ray in that all the compartments are opened and drained. Onodi¹⁰ in his splendid book, has pointed out that there may be horizontal septæ, and also calls our attention to the fact that there may be only one frontal sinus, and that again one frontal sinus may overlap on its fellow. It is well to take two sets of X-ray plates, the antero-posterior and the side view, the latter however have been overestimated as brought out by Mosher⁶ of Boston. Stereoptican views, as suggested by Beck¹¹, would greatly aid in determining the depth of these cavities.

The frontal sinus is present at the fifth year and is fully developed at the age of eighteen. In children it should be especially borne in mind that the frontal sinus is a sequence of the cellular expansion of the anterior group of ethmoid cells, consequently in the treatment of this region, the ethmoids must receive due consideration, not only in the child but also in the adult as well. Oppenheimer¹² states that palliative measures will cure the majority of cases of sinusitis in children, and if surgical interference is required, very little tissue should be destroyed.

Acute frontal sinus disease without complications will usually recover under simple medical measures. Shrinking of the tissues with cocaine and adrenalin, and the irrigations with warm alkaline solutions tends to reduce the inflammatory reaction. Suction with the Brawley suction apparatus not only withdraws the pent-in secretions, but by its negative pressure causes the mucosa to assume a more healthy condition. The general systemic treatment must be carried out carefully because such infections do not readily occur unless the bodily resistance is lowered in some manner. Elimination of the toxins from the intestinal track, proper rest and the careful regulation of the diet, all tend to bring about a normal healthy condition. Internally, hot drinks can be

5. P. Watson Williams—*Journal of Laryngology*, May, 1914.

6. H. P. Mosher—Reprint.

7. Kyle—*Trans. of Acad. of Ophthalmology and Otolaryngology*, 1911.

8. Beck—*Trans. of Acad. of Ophthalmology and Otolaryngology*, 1911.

9. Killian—*Laryngoscope*, Feb., 1913.

10. Onodi—*Optic nerve and Accessory Sinuses*.

11. Beck—*Trans. of Acad. of Oph., Otol., Rhinology and Laryngology*, 1913.

12. Oppenheimer—*Trans. of Acad. of Ophthalmology and Otolaryngology*, 1913.

given and atropin administered in selected cases. Aspirin is found useful in these cases.

Killian¹³ reports good success with the electric light bath for the head where warm, moist air is inhaled, causing an active hyperæmia.

Topical applications such as tannic acid in glycerin, and ichthyol 10 per cent., find a useful place in selected cases. Others advocate the use of hot air to aid in drying up these cavities.

During the first quiescent stage, the abnormal structures should be removed and the septal deformities, if present, corrected *i. e.*, place the nose in a normal physiological condition.

The above treatment usually suffices for the acute cases. Where the more chronic forms are encountered and the drainage is inadequate, it will be necessary to remove the anterior end of the middle turbinate. Other cases may call for more radical treatment, and in these cases it is best to leave the middle turbinate work as a last procedure, it serving as a landmark to prevent the possibility of injuring the cribriform plate. The agger nasi cells are opened with a straight curette, and a blunt probe may be inserted in the frontal sinus. Some advocate the taking of a radiogram at this point to ascertain if it is directly in the sinus or in a large anterior ethmoidal cell. If the naso-frontal duct is closed, a Good's nasal rasp is inserted and the same curetted anteriorly. The mucous membrane should be treated with as little curetting as possible consistent with establishing free drainage, for it is through this medium that the patient is able to resist future infective agents. If granulations arise and obstruct the duct, they must be cauterized, preferably with tri-chloroacetic acid.

Stucky¹⁴ states, "the middle turbinate seems to be the chief offender and should be dealt with as radically as is consistent with the conditions, at the same time conserving tissue and protecting against traumatism."

Hajek⁴ states that removing the anterior end of the middle turbinate cures 90 per cent. of the cases where the necrosis is not too extensive.

Ingals¹⁵ claims that his intra-nasal operation will bring about a successful issue in 95 per cent. of the chronic frontal sinus cases. He reports good success with the electric burr and in some cases inserting a gold tube.

Complications, such as aural, ocular, orbital and meningeal, when present, must be met promptly.

In several cases of anosmia occurring as a result of a chronic ethmoid, a frontal infection,

there has been a partial restoring of the sense of smell by repeated massage of the mucosa in this region with scarlet red (7 per cent. solution). The sinuses, of course, had been previously drained.

In the greater percentage of the cases all that will be found necessary is to correct the deformities in this "vicious circle" as this region is called by Ballanger.¹⁷

It is well to take the coagulation time in every case and if a hemophilic tendency is found, the calcium therapy administered for a week previous will be found useful in these cases.

Vaccine therapy has proven of little help in these cases. In the acute and subacute forms an autogenous vaccine appears to be a good tonic in the shape of building up the patient's general resistance.

At a recent meeting of our section, a very instructive paper was given by Dr. Prentiss on the anatomy of the frontal sinus. This has in a way coincided with Dr. Mosher's work from the clinical aspect.

Brawley¹⁸ reports an interesting case where a patient with persistent headaches was referred to him. The vision, eye grounds and fields were normal. Further examination revealed a closed naso-frontal duct and the patient was eventually relieved of all headaches with repeated cauterizations of the duct with tri-chloroacetic acid.

In the end, the rhinologist needs the co-operation of the oculist, internist, radiographer and laboratory expert that he may have the proper elucidation of the case, which in turn means the welfare of his patient.

Discussion

Dr. E. H. Knittle, Waterloo—The usual cause of acute cases is the result of "cold in the head" centering about the middle turbinate region. In such cases we naturally get good results from a local treatment and unless there is an enlarged bulla, etc., there may not be any indications for surgery, but we should watch these cases to make sure that they do not pass into a chronic form. Cultures from the discharge do not seem to give us a great deal of information and autogenous vaccines are without the success heralded. The acute cases are very apt to be overlooked by the general practitioner. Treatment embraces local astringent solutions and syringing and an ice pack on the brow, while removal of the middle turbinate, which is the chief offender, and opening up the frontal nasal duct is necessary for proper cure in a great many cases.

Dr. Cobb, in Closing—I think these cases generally wait too long before being seen and often they have been tided over by the general practitioner until

13. Killian—Laryngoscope.

14. Stucky—Trans. of Acad. of Ophthalmology and Otolaryngology, 1913.

15. Ingals—Reprint.

16. Ingals—Reprint.

17. Ballanger—Trans. of Oph., Otol., Rhinology and Laryngology.

18. Brawley—Reprint.

they come to the specialists when some operative work is then necessary. Cases should not be operated without securing good X-ray plates. The acute cases if seen early can generally be handled without operative interference. Later when the inflammatory reaction has subsided, septal deformities and turbinal hypertrophies should be corrected.

EDUCATIONAL PROPHYLAXIS*

E. L. ROHLF, M.D., Waterloo

Education the light of the world. Take education to a heathen country and you have civilization; add it to farming and you have agriculture; apply it to paint, brushes and canvas and you have art; to wood, stone and mortar and you recognize a finished architecture, etc. Special schools with especially prepared instructors are constantly being organized, in order that the highest type of perfection may be acquired.

We are living in an age of development and progress in every branch of educational science, no branch of which is making greater progress than the one represented by the men present here today, who labor constantly for the alleviation of suffering and misery from all the ills to which the human family has fallen heir.

The recognized medical colleges have raised the standard of requirements for matriculation, and increased the efficiency of the curriculum until the graduate of today stands head and shoulder above the graduate of a decade ago. He goes out with a firmer assurance that he will succeed, and is recognized by the old practitioner with a higher degree of respect.

The trend of education along material development is also most evident; better mechanics and machinery to produce finished products more rapidly; better civil engineers to perform feats of construction, which shortens distance to facilitate the progress of commerce at a faster pace; heavier steel with better constructed engines to distribute produce back and forth across the continent; aeroplanes to perform feats of daring to satisfy the morbid curiosity of thousands. For greater gains to the individual the booster spirit is rife. Short courses for the dairyman, farmer, wholesaler and retailer are constantly being inaugurated. The spirit of rapid exchange for larger personal gain is certainly driving the American people into such high tension living that many are driven insane, become criminals, or fill graves at a premature old age. The degenerative process is even inherited by their posterity. Their physical, mental and moral

status are undermined. With our forefathers a promise was as good as a vote. Today a promise, unless in writing, has no place in the business world, and even then we have no assurance that it will be fulfilled. Others forms of degeneracy have no doubt been forcibly brought to your attention by the sad and pitiful situations related to you by some who have come to you for advice, viz., that some human vulture has fallen so low in moral conscience and self respect, he dared to give doped candy or drink to his innocent victim, and during their subconscious state ruthlessly steal their virtue, the priceless jewel of womanhood, ruining and blighting their whole life; and this is not true of men alone.

Deceit, selfishness, and greed have exchanged places with honesty, self-denial and charity. The Golden Rule has been lost in the tumult and whirl of the onward rush after the wealth, or to satisfy personal degenerate instinct.

Another monster of destruction that may be likened unto a huge reptile in whose coils the vitality of our people is gradually but surely being crushed out, is the social evil. There is perhaps no other single condition which causes more misery and suffering, or makes more mental and physical wrecks, nor brings more material into the hands of our profession, both medical and surgical, and afford a more lucrative prey for the charlatan and quack. Legislation is feebly trying to combat the effects of this evil by creating laws which put a premium on purity, and a label of "damaged goods" on the unfortunate. What is the remedy for all this? Education of the laity. Education must be along two distinctive lines; publicity through the press and special instruction throughout the public schools, and other special institutions supported and conducted by the state.

By education through publicity in the press I mean that a bureau of medical information should be formed and conducted by men chosen from the general profession whose knowledge in the aggregate would be undisputed authority on any subject that might come up for consideration. Their remuneration should be by the states individually or the government in general. The articles compiled by these men should have widespread publicity. For example of what in my opinion would be good subjects to dwell upon and that you might formulate an opinion as to the effect, I would suggest for topic personal hygiene, what to eat, how much and why. Home sanitation—what leads to premature old age. The effects of gonorrhea and syphilis; social purity from a medical standpoint; first points in nursing; contagious diseases, their complications and

*Read at Austin, Flint-Cedar Valley Medical Society, at New Hampton, July 13, 1915.

sequellæ; and why quarantine regulations should be better observed; etc.

If we could hammer away and keep everlastingly at it, as has been done with tuberculosis the past ten years, I am sure much good could be accomplished for the avoidance of sickness, prevent epidemics in course of time, increase longevity, and in proportionate measure increase the comfort and happiness of millions. Besides our profession would have more hearty co-operation in the sick room, our instructions would be observed, and orders followed out to the letter because the laity could better appreciate the reasonableness of our deductions and treatment, and what we expect to accomplish.

Publicity would reach the fathers and mothers of today, but as the boys and girls of today are to be the fathers and mothers of tomorrow, their education must come through public schools and higher institutions. How can we accomplish this? First we should recognize that children are born with smaller and graver mental and physical defects. Therefore medical inspection should be uniform throughout the land, and parents advised of conditions. We cannot expect to start with unequally developed children and have a uniformly finished product. Neither is it fair to expect a child with enlarged tonsils and adenoids, defective vision or hearing, to be able to accomplish as much as if they were not so handicapped; and parents should be made to see and understand this. How about the curriculum? I would like to see general hygiene, physiology, domestic science, and sexual hygiene taught from a medical standpoint in every public high school in the United States. Is it fair that we should have state colleges experimenting with and developing the best type of breeding for all of our domestic animals which we use in this country and teach the results of their labors to thousands, and neglect to teach our high school students how wonderfully we are constructed, how finely adjusted, and how to protect and preserve this delicate machine of ours? To be forewarned is to be forearmed. Shall we continue to allow our posterity to go blindly forth into the pitfalls of society and allow them to become inoculated with the virus of syphilis or the gonococcus bacillus, and devitalize their delicate organism, or shall we rise above petty modesty and raise the blindfold of ignorance and teach them how sexual diseases are contracted, how they effect the individual and his posterity.

Few there are who with eyes open, and proper home training who would willingly take chances when they had everything to lose and nothing to

gain. It would appeal to me that it is better to place weapons of enlightenment for defense in the hands of our children, than legislate against them after they have fallen in the dark.

You are all aware no doubt that cases of syphilis and gonorrhea exist in our high schools today. It is to be deplored. How should it be taught? I think it feasible to divide states into districts and have medical men and women especially prepared and well chosen do the work. Give a certain amount of time in each school in the district. In this way the very best talent could be secured and the best results attained.

Domestic science and manual training have done much to make more practical men and women; but this would do infinitely more in the future to preserve the race, make better and stronger men and women, and happier homes with a healthier posterity. The more we learn the greater the thirst for knowledge, so I would like to go one step further. I would like to see established and conducted by the state an institution free of expense to any one who wished to attend, except personal clothing, in order to place it within the reach of rich and poor alike. This institution to be a combination of college and hospital, the college to take up all the branches of study that have to do with home life, dietetics, home economics, domestic science, tailoring, etc. The hospital to give one year course in nursing. What a wonderful influence for good, not manifest at once, but in course of years.

Do you think we would have much trouble raising babies, having sanitary clean homes, better fed and better clothed families. We have hospital training and trained nurses to take care of people after they are ill. (They make good wives too). Why not teach the prospective wives and mothers how to take care of their own home and sick folks?

It has been my endeavor to avoid writing science but instead sense. If there is any way to amalgamate the medical profession to stand as a unit for some legislation along the lines of thought indicated by these rambling remarks I am sure the benefit of the educational prophylaxis would more than repay the effort.

Putting on brakes to stop high tension, recognizing the laws of nature and respecting them, knowing requirements of food elements and how to prepare them, meeting the social evil with open eyes and avoiding it, having knowledge of disease and in part how to prevent and care for it under instruction, with a deeper regard and higher respect for the old family physician.

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UNIVERSITY OF IOWA ALUMNI CLINIC

The State University Alumni Clinic was held on April 11th and 12th to celebrate the getting together of the graduates and friends of the medical school. About 260 medical gentlemen were present. The old Keokuk Medical School with its long list of graduates, Drake University School of Medicine with a shorter list of graduates, had been absorbed into the University family, and were welcomed as a part of the University family. Nearly all of the clinical professors participated in some clinical work during this period of two days. The clinical material was well arranged so as to give the clearest idea of how the University was doing its work.

Dr. Rowan had two hours assigned to him, and during this period presented three series of cases: one decompression operations; one of treatment of delayed union, and one representing different types of goiter. Two illustrative operations were performed, one for decompression and one for goiter.

Dr. E. C. Rosenow of Rochester, Minnesota, presented an outline of the work he had been doing the last few years in regard to infections, showing that nearly all serious infections could be traced to certain primary foci existing somewhere in the body, which could generally be found by careful study. He showed how closely different strains of the bacteria were reproduced in secondary foci of infection with great uniformity. Based on Dr. Rosenow's theories and observations, it could be shown that the foci of infections could best be cured by destroying the primary focus, thus relieving the system, and

how unscientific are the use of vaccines so commonly employed with the view of relieving an infection already in the system; that instead of putting more in, we should destroy the primary focus and trust to the protecting agents of the system.

Dr. De Lee of Chicago, gave a clinic in the absence of Dr. Asa B. Davis of New York. A considerable number of patients were examined by Dr. De Lee, representing different stages and conditions of pregnancy, by a singular coincidence, two patients were brought in in different stages of labor, and the Doctor was able to demonstrate very important facts represented by these two cases.

Dr. Palmer Findley of Omaha, gave a clinic on the second afternoon on Gynecology.

A very interesting clinic was the clinic on Orthopedic Surgery by Dr. Steindler. Dr. Steindler was able to present a roomful of children suffering from different types of deformity, —the outcome of the very helpful legislation bringing a large number of crippled children to the University Clinic for their own good and for the teaching of medical students.—Dr. Steindler was particularly fortunate in having so many patients showing different types of deformity, and in different stages of treatment.

Dr. Howard presented a very able and interesting clinic in Internal Medicine. Dr. Howard's exceptional experience and his skill as a diagnostician and clinician, furnished the visiting gentlemen with many thoughts for their future use in the treatment of medical diseases.

The Eye, Ear, Nose and Throat clinic by Dr. Dean, was exceptionally fine and very extensive, and must have been very profitable to the gentlemen working in this line.

It was quite to be expected that the graduates of the institution would be enthusiastic over the work done at their Alma Mater, but there were graduates of other institutions who were quite willing to confess on this particular occasion, that the University was doing work quite beyond their expectation, particularly in clinical lines. It was accepted that the Iowa University could furnish high grade laboratory facilities, but serious questions had been raised as to the clinical facilities they could offer students, and while it may be assumed that the exhibition of patients at this time was exceptional, yet the familiarity with the situation manifested by the professors, and all the evidence that could be collected, seemed to show that the medical and surgical clinics are quite satisfactory, and that the University at the present time is in a position to do work that is creditable to the state, and as acute a critic as Dr. Voldeng,

was deeply impressed by the conditions, and stated that we had not probably been giving the University credit for the good work it was doing. Without criticizing the past history of the school, it is now apparent that the faculty is thoroughly in earnest and quite capable of building up a high grade institution, and we sincerely hope that the medical profession in the state will see to it that no political forces in the state shall in any way be permitted to undo the good work that is now being done at our own university, by attempting to lower the standards which have been so universally established as the proper education of men who devote their lives to the healing of the sick.

BETHLEHEM HOSPITAL

On the cover of "Modern Hospital" is a picture of Bethlehem Hospital of today, better known as "Old Bedlam." Many interesting historical facts cling about this ancient foundation and not the least, indeed the most important, is the modifying influences of time in our conception of insanity and of its treatment. For centuries writers found the illustrations for the awful things in human life at Bedlam, and we recall in our youthful days of our worst doings being compared to Bedlam, some awful thing, we did not know what. The Sairy Gamps and Betsy Prigs of Dickens' stories received their inspirations as attendants on the sick at "Old Bedlam." Charles Reed, in "Hard Cash," reveals some of the secrets of such institutions. The painful story of Jack Sheppard's mother, as related by Ainsworth, is connected with the institution. The doings of our political vagabonds, scamps and grafters seem weak and common-place compared to the virile efficiency in grafting of the masters of Bedlam. We are astonished that some of our own political montebanks have not evolved a code for institutional management from the history of this most famous institution.

It appears that Bethlehem was founded by the Brothers of Bethlehem on the 13th day of Oct. 1247. On this day Henry III on the Feast of the Translation of Edward the Confessor, passed with a procession from St. Paul's to Westminster Abbey, carrying a phial of the blood of Christ under a canopy, and when they reached St. Bodolphs, incense arose about the holy water and fell upon land given by Simon FitsMary,—the sheriff to the Church of the Glorious Virgin Mary of Bethlehem—and thus was founded this historic institute by Godfrey, the Bishop of Bethlehem.

The present beautiful building, commenced in

1812 and completed 1844-46, gives no evidence within itself of the strange things that have happened in the old structures which followed one after another from its foundation in 1247. It is only in the story of Bedlam by Dr. O. Donoghue, that we learn of what really did happen there. "The horrors of Bedlam have been perhaps the greatest horrors the world has ever known. Its history has been woven into the history of civilization in a way that perhaps has not happened to any other structure in the world; and from out its hallowed walls have come some of the greatest reforms in the care of the sick."

EFFICIENCY OF GERMANY

Dr. John E. Bacon of Miami, Arizona, in his President's Address before the Surgical Association of the Southwest, and published in the Arizona Medical Journal, makes some interesting and pertinent observations on German efficiency.

Without entering upon any of the alleged causes of the war and without regard to personal sympathies, Dr. Bacon states what might have been seen in Germany before the war: "a unity of feeling pervading the entire population and a far better standard of physical health among her soldiers." Dr. Bacon could have said much more in relation to German efficiency. The industrial classes received the same consideration and were rapidly making such progress as to absorb the markets of the world. The German workman had his physical powers brought to a high degree of development by a compulsory military service; he had had a discipline of equal or perhaps of greater value than the physical training, and he had been filled with the feeling that the German nation was the one great fact. While our people were being entertained with the political cry of a tariff to protect against the pauper labor of Europe, Germany was busy with the construction of the most sanitary homes for her industrial classes which were far better cared for than our own. An observer, no better qualified than ourselves, could easily see what the competition would be in war or in the industries. The surprise has not been so great to us to know what Germany has accomplished in this war as that the Allies have protected themselves so well as they have. Germany's war efficiency and industrial efficiency have been a part and parcel of the same thing and will continue so, and the rest of the world must follow in the same course or fall behind. To claim that Germany is growing under the iron heel of tyranny is a foolish thing for us to say when the exactions of political graft and incompetency is a far greater tyranny.

Compare the homes of our working classes with those of Germany. Compare the streets of our cities with the cities of Germany. Compare the governmental care of our industrial classes with those of Germany.

Let us consider one thing specifically and that is welfare conditions; that does not mean dollars or marks—although marks and pfennigs are carefully looked after if earned. If a workman is sick or is injured, it becomes the duty of the government to provide the most helpful care, nothing is left to chance or charity to restore him to productiveness in the shortest period of time. Every municipality in the industrial centers has within recent years provided completely organized hospitals of size proportionate to population, equipped with every facility to diagnose and treat disease and injury under the direction of physicians and surgeons of the highest order of skill. These hospitals have thoroughly equipped hydrotherapeutic and mechano-therapeutic departments, the operation of which tends to greatly hasten the time of resuming work. Politics, contract-to-the-lowest-bidder and graft do not exist there. National unity and human welfare are grave and serious matters in Germany. The result of this war will bring the world nearer toward German ideals and not away from them. The helpless and hopeless condition of English workmen in industrial centers will be vastly improved. Political incompetency and graft will become less the natural order of things in our own country, and the dollar premium on all right-ful acts will not be the only standard of measurement. The old order of human conduct must change. The nation that fails to understand this will pay tribute to the stronger. Big guns and high explosives do not count for preparedness compared to the discipline of universal enforced military training.

EUSOL IN THE TREATMENT OF GAS GANGRENE

We have, from time to time, had papers before our medical societies on gas gangrene and generally the treatment has been anything but satisfactory. During the present European war the number of cases of this form of gangrene has been so great and so serious in their results that surgeons and scientists have devoted much thought and study to means of lessening the mortality from this infection. The Edinburgh Medical Journal for November, 1915, records certain investigations which have been carried out in the pathological department of the University of Edinburgh with the object of providing an anti-

septic agent capable of preventing or arresting this most virulent infection.

The preparations of hypochlorous acid—eusol and eupad—suggested by Professor Lorrain Smith have had their claims abundantly confirmed as the result of elaborate laboratory tests. The results of laboratory tests cannot be made to apply in cases of serious wounds in battle, when the cases reach the hospital, but, as a preventative antiseptic agent, have passed a rigid test. As the cases of gas gangrene come to us, the curative value of the agent corresponds to the laboratory test. The curative value of eusol and eupad is illustrated in a series of consecutive cases reported by John Fraser, R.A.M.C., upon which the Journal comments as follows:

"It is with special satisfaction that we notice here an important contribution to this subject made by one of our colleagues, Captain John Fraser, R.A.M.C., who has been employing eusol and eupad in a clearing hospital in France since June of this year, under the most favourable conditions for estimating their value. His present communication deals with the use of hypochlorous acid in the treatment of gas gangrene, and goes far to establish its superiority over the antiseptics hitherto employed to combat this most fatal complication of wounds."

"Nine consecutive cases of severe gas gangrene are reported, and of these eight recovered. In the ninth case the gangrenous process was arrested but the patient died of leptomeningitis. This is a very striking record, and not only warrants, but clamorously calls for, a more extended use of the methods adopted."

"One case is especially noteworthy. The patient had been wounded through the soft tissues of the right calf five days before admission to the hospital, and his condition was grave in the extreme. Below the knee the limb was emphysematous and cold, and from the knee to the groin gas could be detected on palpation and percussion. After due deliberation the limb was amputated through the middle of the thigh by anterior and posterior flaps, and the parts above were freely incised and disinfected with eusol. The gas gangrene was immediately arrested and the patient rapidly recovered."

ST. LUKE'S HOSPITAL EXTENSION (Chicago)

According to the papers, \$300,000.00 has been raised towards completing a fund of \$2,000,000.00 for the purpose of furnishing facilities for the care and treatment of patients of small means.

St. Luke's Hospital has come to realize that the hospital facilities generally furnished are for the rich and for the poor (who are public charges), but they have made but small provision for the care of people of moderate means who are able to pay only a small hospital fee.

We are approaching a condition included un-

der the general terms of "Workmen's Compensation" for accidents, (and it may be for sickness), which will include care for the working classes who are affected by the workmen's compensation acts, but there are still a large number of people in large towns, and in small towns, that need hospital care, but cannot get it because of the present high rates charged private patients. It therefore becomes the duty of the communities to provide in some way, a fund for the care of self-respecting persons who are able to pay only a small part of what their actual hospital care costs. As near as we have been able to ascertain, the amount of charity work in hospitals varies from 5 per cent. to 15 per cent. of what the hospital receives, and this condition of things leads to very poor hospital equipment, and it leads to the absolute exclusion from the hospitals, of a considerable number of worthy and self respecting persons who are not able to pay the ordinary fees charged.

There seems to be but two ways of bringing about this important provision. One by creating a permanent productive fund by large contributions from people who are able to make them, and the other by a moderate tax as is now provided for in maintaining libraries. A city of any importance would be thought to be very much behind if they did not vote a tax to support a library, but are entirely oblivious to the need of making a similar provision for the maintenance of hospitals. We have frequently, through this periodical and otherwise, called attention to this very important fact, which St. Luke's Hospital has recently given expression to, and we hope before long, to record other instances of similar character. The state of Pennsylvania has been very liberal in this direction, and has voted large sums to maintain hospitals for the care of a class of people that the hospitals in Iowa are not able to admit at all, except through the generosity of some friend or society.

THE TRANSMISSION OF PNEUMONIA

Some of the older European clinicians considered the possibility of the transmission of pneumonia from one person to another when the conditions were favorable, as in the presence of lowered vitality. This view seemed to be negated by finding in the mouths of normal persons great numbers of pneumococci, and it appeared more probable that the patient's mouth furnished the germs which became active when the resistance became lowered.

Some recent studies have shown that several varieties of pneumococci are superficially alike

but differ in virulent activity, and that one variety produces three-fourths of all the cases of pneumonia. The variety of pneumococci found in the mouths of normal persons are of the non-virulent variety and do not produce the disease. Furthermore the virulent group of pneumococci do not grow in the mouth under ordinary conditions, the most favorable of which are close attendance, as of nurses and members of families. These facts seem to show that the teachings of Johannesssen and others were probably correct and that patients suffering from pneumonia may communicate the disease to others, and convalescents and attendants may for a time be "carriers" of this type of infection for a period varying from twelve to ninety days, estimated at an average of thirty-nine days. If these observations should prove to be correct, the isolation of cases of pneumonia advocated and enforced by a former Iowa State Board of Health should be insisted on.

AN IMPORTANT EDUCATIONAL OPPORTUNITY LOST

It is reported that Columbia University was unable to raise the million dollars necessary to take up the option on the property which had been selected as a desirable site for the proposed combined medical school and hospital of Columbia University and the Presbyterian Hospital, New York. This is much to be regretted, for the purchase of the property would furnish an opportunity, which can hardly occur again, to erect a great teaching and research institution on a site admirable in situation and sufficiently large for future expansion. With the growth of the city, Washington Heights will gradually become the center of population of Greater New York, and a vast clinical material would thus have been made available, for the Mayo Clinic at Rochester, Minn., has demonstrated that patients will travel any distance if they are assured of special opportunities. It is a pity that the wealthy men of New York could not in some way have met the needs of the great university in their city, and it is to be hoped that some one may yet come forward before the plot is broken up into building lots and sold. If the call had been made in San Francisco, Chicago, or Pittsburgh, it is probable that mere civic pride would have guaranteed the obtaining of the sum when it was needed.—(New York Medical Record).

THE RELATION OF HYPERTHYROIDISM TO IRRITABLE HEART OF SOLDIERS

All medical men who have been attending officers and men from the Expeditionary Force have become acquainted with the so-called "irritable heart." It occurs frequently in men home from the front, and is usually only of a temporary character. It is un-

doubtedly due to the constant strain of modern warfare, added to, in the case of officers, by the great sense of responsibility which is ever felt by them. The accumulated efforts of the disturbing elements of active service produce a profound action on the nervous system generally, and the nervous mechanism of the heart likewise feels the strain. Severe fright, great anxiety or worry, and great emotional disturbance have long been recognized as antecedents of Graves's disease, and it is not, therefore, a matter of surprise that this condition should develop in men invalided from the front. The cases described by Dr. Percival White and Dr. Hernaman-Johnson are of interest in drawing attention to this possibility, and will cause careful clinicians to look out for exophthalmos and the other symptoms characteristic of Graves's disease; but it remains for further observation before it can be definitely stated that this disease may explain many of the so-called irritable hearts. For cardiac strain producing palpitation and irregular action of the heart is of common occurrence without the appearance of the other phenomena of exophthalmic goitre.—(London Lancet, January 8, 1916.)

APPOINTMENT OF A BELGIAN SCIENTIST

It is announced that Dr. O. Van der Stricht, formerly professor of histology and embryology at the University of Ghent, Belgium, who had been a refugee in Holland since the outbreak of the war, has been appointed Fellow in Cytology at the Medical School of Western Reserve University, where he will devote his time to research.

A COURT ORDERED TONSILS REMOVED

A court ordered tonsils removed. This happened in Brooklyn and is the first decision of its kind. The board of education had passed a rule that parents must send their children to school in as good physical condition as possible. The court not only sustained the rule but also ordered the parents of a pupil to have their son's diseased tonsils removed. They had ignored frequent complaint from the board of education that the boy was incapable of making progress in his education unless his tonsils were treated. Of course, this decision will apply to dental defects as well and the board of education in New York will have authority to compel parents to remove such defects as may retard the children's progress in school work and which are a menace to their children. This decision is most important and will have a far reaching effect.—(The Journal of the Indiana State Medical Association.)

EARLY IOWA MEDICAL JOURNALS

It appears from reference to some of the early transactions of the Iowa State Medical Society, that at the time of the organization of the Society, certain journals had been established in Iowa, which were probably short lived. We have not been able to

secure any copies of such journals, or to ascertain definitely if any such journals existed. We are therefore asking if in any of the old libraries, such journals have been preserved. If so, the Journal would be very glad to be informed of the fact, which would constitute an interesting item in the medical history of the state.

RECENT APPROPRIATIONS OF THE ROCKEFELLER FOUNDATION

Appropriations amounting to \$1,200,000 have been made recently by the Rockefeller Foundation. The Rockefeller Institute for Medical Research receives \$1,000,000 for additional endowment to be used in the department of animal pathology recently established near Princeton, N. J.; \$25,000 is given to the institute for medical research and for medical supplies and services needed for relief work in Europe, most of which will be used to support the hospital work being carried on in France by Dr. Alexis Carrel. The China Medical Board will receive \$125,000 for the purchase of additional property adjoining the Union Medical College in Pekin, for the promotion of medical teaching in China. The international committee of the Young Men's Christian Association received \$50,000 in support of the work in the military prison camps in Europe.

DR. H. M. BRACKEN

Dr. H. M. Bracken of the Minnesota State Board of Health has been made Chairman of the Council of Public Health and Instruction, to take the place of Dr. H. B. Favill who recently died.

A NEW MEDICO-LEGAL QUESTION

An unusual case has occurred in which damages were claimed from a medical man for "assault." A woman engaged in domestic service fell down stairs and injured herself. The insurance company in which her employer was a policyholder sent a physician to examine her. She received no notice of this visit and was asleep in bed when he came. According to the evidence he roughly pushed past her mistress who opened the door, awoke and examined the woman, and tore off a plaster and strap which her own physician had applied, causing much pain. The physician gave a different account. He said that the woman's mistress invited him to the house, and that he removed the plaster at the plaintiff's request. He had made no appointment to visit her; that was a common thing; 75 per cent. of such cases were done under the same terms. In reply to the judge's question, "you suggest that doctors visit patients without first obtaining their consent?" he replied: "It is done in these cases." To this the judge retorted that the defendant had set up a new idea as to the rights of physicians from his knowledge of the profession, he thought was a libel on them. Damages of \$125 were awarded to the

woman.—(Journal of the Medical Society of New Jersey.)

CHAUFFEUR'S KNEE

Dr. Gustav F. Boehme, Jr., in the New York Medical Journal for December 11, 1915, says:

"A number of drivers of cars have in the past two years consulted me for a pain in the knee, made worse by ascending stairs or on moving the knee in the control of the pedals of their machine; this was their only complaint."

"On examination flexion and extension of the knee (usually the right one) was limited and painful, and the patient was cognizant of a sense of grating in the front of the knee. On each side of the patella a fluctuating swelling, of more or less extent, could be noted, depending upon the length of time the condition had existed. The picture is one of a bursitis of the subtendinous bursa lying between the tendinous expansion of the quadriceps and the periosteum of the patella. The process differs from that of housemaid's knee in that the superficial bursa is uninvolved, and no swelling is felt in front of the quadriceps tendon on movement, but laterally to it the swellings can be felt to change in size, while the grating feeling is distinctly made out."

"The mechanism of this process is as follows: The position of the knee in the ordinary car is a rather cramped one; flexion and extension of the knee occur in shifting the gas and other pedals by the foot. In those predisposed to this condition, this constant movement sets up a low grade inflammation in the subtendinous bursa."

"What has been rather surprising is that in none of these cases has there been any sign of inflammation in the ankle joint or in the tendons crossing it. I am at a loss to explain this, yet I have never seen a tenosynovitis of the ankle tendons in a chauffeur. I have felt, however, that the fact that the ankle movement is not a cramped one, while that of the knee is undoubtedly limited by the position in the car seat, and thus adds in its semiflexion to the difficulty of moving the quadriceps tendon, occasions more pressure on the bursa than usual, and in this way predisposes to inflammation at this point."

"Treatment, briefly summarized, consists of cessation from driving, rest for a short time, with local applications of aluminum subacetate or lead and opium solution. Passive movements with massage and baking should be begun early to prevent stiffness of the knee."

THE HIGH PRICE OF DRUGS

The effect of the war in Europe has been brought closely to the medical profession of the United States on account of the strikingly abnormal increase of the price of many drugs, ranging from 50 to 500 per cent. above the figures of normal times. That it should be impossible to obtain some drugs manu-

factured exclusively in Germany and that there should be an enormous increase in cost for the small amount obtainable is easy to understand, but it is not clear to the ordinary observer why there should be such an enormous advance in the price of other articles manufactured in our own country. One finds it necessary to enter into considerable explanation often times with patients, when prescribing some of these high-priced drugs, in order to transfer the odium from himself to the limited supply of the drugs in question. In addition to the hardship of a limited supply and abnormal increase in price, we have a new complication to contend with in the introduction of worthless imitations of certain drug products, the menace of which has been disclosed by the United States Department of Agriculture. It is stated that large quantities of such spurious drugs have been sold to drug stores through the inducement of lower prices. Among these valueless imitations a preparation sold as neosalvarsan is cited which is found to contain nothing more than salt colored with a coal tar dye, yet which was offered in an original container or an accurate imitation of it, with a label which was an exact reproduction of the genuine original. A drug called aspirin has also been introduced by these imposters, whose analysis by the government officials showed it a worthless imitation of the real article. It is stated that, owing to the manner in which these preparations are peddled about, it has been difficult to trace their interstate shipment. This imposition menaces both the druggist and the physician, though its discovery may depend upon negative therapeutic results.—Northwest Medicine, December, 1915 (Editorial).

CAESAREAN SECTION BY BOMB SHELL

During the bombardment of Rheims the lying-in department of the public hospital was transferred to the cellars and the service went on without a break and without fatal infectious complications. Henrot reports that a new-born child, a fine specimen, was brought in alone and when he inquired for the mother learned that on the way to the maternity she had been killed by a shell which had torn open the abdomen and the child had only to be lifted out.—(Indianapolis Medical Journal.)

GERMAN AND AUSTRIAN PHYSICIANS LOST IN WAR

During a debate in the Hungarian Parliament, January 20, it was officially stated that from the beginning of the war until November 1 last, 373 German surgeons have been wounded, ninety-six have died on the battlefield, 707 have died from diseases and 215 have been taken prisoners. The wounded Austrian medical officers numbered 315, and 971 have died from infectious diseases, 101 have been killed while rendering medical assistance on the firing line and 331 have been taken prisoners.

BOOK REVIEWS

TREATISE ON FRACTURES

By John B. Roberts, A.M., M.D., F.A.C.S., Professor of Surgery in the Philadelphia Polyclinic and College for Graduates in Medicine; Sometime Chairman of Fracture Committee of American Surgical Association; Membre de la Societe Internationale de Chirurgie; and James A. Kelley, A.M., M.D. Attending Surgeon to St. Joseph's and St. Mary's and St. Timothy's Hospitals; Associate in Surgery in the Philadelphia Polyclinic and College of Graduate Medicine. With 909 Illustrations, Radiograms; Drawings and Photographs. J. B. Lippincott Company, Philadelphia and London. Price, \$6.00.

This is an entirely new work by well known authors, and has been prepared with the best known methods by study in mind. The book is rich in illustrations referring to diagnosis and treatment. The first chapter on General Considerations of Fractures is full and helpful, including causes and forms of fractures, displacements, accidents to surrounding tissues, nerves, general principals of treatment, conditions of bones influencing healing, X-ray examinations, retention appliances, all fully illustrated with photographs and radiograms.

Chapter second relates to The Operative Treatment of Closed Fractures. The authors are of the opinion that very few fractures require operation. But before deciding on operative or non-operative treatment, a careful expert radiographic examination is of the utmost importance, to guard against the accidents of unreduced fragments; of soft tissues between the bone, etc., interfering with union; which is so often the foundation of damage suits. The authors are quite of the opinion that the doctor who attempts operative treatment of fractures without training, experience and facilities, makes a serious mistake and is very likely to pay heavily for his enterprise.

These two chapters, which are beautifully illustrated, should not be used as references only, but should be carefully studied.

The remaining chapters are devoted to particular fractures, and constitute a continuous clinic which can be followed from chapter to chapter, illustrated by photographs and radiograms of displacements, of methods and diagnosis, reduction and appliances for retention, altogether forming a most readable and instructive book for the general practitioner and general surgeon.

CANCER OF THE STOMACH

A Clinical Study of 921 Operatively and Pathologically Demonstrated Cases. By Frank Smithies, M.D., Gastro-Enterologist to Augustana Hospital, Chicago, With a Chapter by Albert J. Ochsner, M.D.; Professor of Clinical Surgery in the University of

Illinois. Octavo of 522 Pages With 106 Illustrations. W. B. Saunders Company, Philadelphia and London, 1916. Cloth, \$5.50 Net. Half Morocco, \$7.00 Net.

When we read the publisher's announcement and the preface we were apprehensive that we had before us a long list of clinical cases, but were greatly relieved when we found only a few illustrative cases in the chapter on Symptomatology, and that the book was really made up of a scientific discussion on cancer of the stomach, based on a study of a great number of clinical cases by a distinguished observer and a surgeon of remarkable acumen.

The first chapter, General Distribution and Etiology, is largely statistical, and very interesting and useful as reference. The etiological considerations are original and conclusively sweeps away many of the theories and speculations which have clouded sound clinical observations as to the particular cause of cancer of the stomach.

Chapter 2.—Morbid Anatomy, Classification of Gastric Neoplasms.

This chapter presents many gross and microscopic specimens from the Mayo Clinic. In the text accompanying these illustrations, the significance of the findings are worked out by McCarty's and Wilson's well known methods, joined with the clinical studies of the author in a brief and direct manner.

It is conceded that the one important factor in relation to cancer of the stomach today, is diagnosis. The gratifying results in operations for cancer of the stomach in the earliest stages, has led to a diligent study of every means to determine what is going on in a diseased stomach. As a help in this direction the authors have established six groups of predominating symptoms, and have cited illustrative cases brought to operation. If the same symptoms invariably pointed to cancer of the stomach, influenced only by such complications as chronic appendix or chronic gall-bladder, the difficulties of diagnosis would be greatly lessened; but it is not so, hence the importance of grouping predominating symptoms and their logical study. It appears to us a useful method.

A chapter on Physical Abnormalities which includes a physical abdominal examination, is useful no doubt in a general consideration of cancer of the stomach, but a diagnosis influenced by such an examination will be generally too late for hopeful surgical treatment.

Chapter five on Examination of Gastro-Intestinal Function is helpful in determining certain rather important facts, not so much in the way of differentiating cancer as in arriving at a knowledge of general stomach conditions. We miss in this elaborate study of methods, definite conclusions as to their diagnostic value.

The chapter on Roentgen Examination in Gastric Cancer, offers us but little encouragement, less than we have been led to suppose in the hands of experienced experts. It would be too much to believe that X-ray examination would reveal early cancer directly, but indirectly would show conditions which

would be very suggestive of malignant disease. The authors, referring to Roentgen ray examination, say: "The diagnosis must be made clinically or chemically." We cannot avoid the impression that the diagnosis must be made clinically.

Chapter seven is devoted to the Blood in Gastric Cancer, and is interesting in presenting a study of the various laboratory methods.

The chapter on the Significance of Gastric Ulcer with Respect to Gastric Cancer, is a valuable contribution, and is full of suggestions and warnings, and should be read by those who find it so easy to diagnose ulcers of the stomach.

Gastric Cancer in the Young; of the 921 cases of cancer of the stomach studied by Smithies, 18 occurred in individuals under 31, or at an average age of 27½ years.

In the chapter on Differential Diagnosis, the author shows that many difficulties lie in the way, but believes that generally ulcer of the stomach may be determined without exploratory operation.

The concluding chapters of the book are by Dr. A. J. Ochsner on Surgical and Non-Surgical Treatment of Cancer of the Stomach. In these two chapters, Dr. Ochsner reflects the best that has been said and done in the treatment of this formerly hopeless disease. He assures us that the results of treatment are becoming better as earlier diagnosis are made, and the surgical reference at a time when a complete excision can oftener be made.

CLINICS OF JOHN B. MURPHY

The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago, Vol. V, No. 1. (February, 1916); Octavo 194 Pages, 33 Illustrations. W. B. Saunders Company, Philadelphia and London, 1916. Published Bi-Monthly. Price Per Year, Paper \$8.00; Cloth \$12.00.

This number of the Murphy Clinics presents the usual variety of subjects.

The first clinic is a congenital cyst of the neck extending into the axilla. The chief interest in this case is the diagnosis and treatment which, if not thought out carefully, might lead the inexperienced into serious operative difficulty. The second case is one of adeno-carcinoma of the breast, and the feature of interest is a discussion of the metastases of cancer.

The fifth case is one of peridiverticulitis of sigmoid. These cases are difficult of diagnosis and demand the highest degree of surgical judgment.

In case 7, 8 and 9 some very interesting observations are made on decompression of the cord from injuries and conditions of the utmost importance in determining the course to pursue. We recommend a careful study of these cases.

Several joint cases of much interest are presented, some of these of marked interest to the general surgeon.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE

By James M. Anders, M.D., Ph.D., L.L.D., Professor of Medicine and Clinical Medicine, Medico-Chirurgical College, Philadelphia. Twelfth Edition; Thoroughly Revised; Octavo of 1336 Pages; Fully Illustrated. W. B. Saunders Company, 1915; Philadelphia and London. Cloth \$5.50 Net; Half Morocco, \$7.00 Net.

Dr. Anders' work on the practice of medicine is so well known to the profession that we need only call attention to some additions made in this, the twelfth edition. There is certain distinct advancement being made in several chapters in the practice of internal medicine that leads to more or less frequent revisions. In several works that have recently come under our notice, we have observed with great satisfaction, abundant indication of the fact that the internist has been as active in prosecuting inquiries as the workers in any of the special lines, notwithstanding the more complex and wider range of subjects to be considered.

The new matter considered in this edition: Colon Bacillus Infections; Large-cell Splenomegaly; Tuberculosis of the Thyroid Gland; Vagotomy; and Hypophyseal Obesity. The subjects partly rewritten are Diabetes; Hydrothorax; Gastro-Enderoptosis; Acute Anterior Poliomyelitis, and several reactions and tests for determining functional competency and for the diagnosis of several obscure diseases. The demands of our more intelligent patients for more exact diagnosis and a more accurate determination of the progress and termination of disease, has placed us in a position where slovenly methods will not serve, and if we desire to keep our patients loyal to us, we must purchase more books and journals and read them more discriminately.

PRINCIPALS AND PRACTICE OF PHYSICAL DIAGNOSIS

By John C. Da Costa, Jr., M.D., Assistant Professor of Medicine, Jefferson Medical College, Philadelphia. Third Edition; Thoroughly Revised; Octavo of 589 Pages, With 243 Original Illustrations. W. B. Saunders Company, Philadelphia and London. Cloth \$3.50 Net.

It has come to be fully recognized that diagnosis is the most difficult chapter in medicine, and that the big man in the profession is the one who can make a relatively exact diagnosis, and the most delicately adjusted apparatus is designed and constructed as aids in this direction. Accuracy in diagnosis is of course an intellectual process but must be directed by mental training of the highest degree; as a necessary helper in this direction is the preparation of books, so arranged as to lead the student in a logical way from one subject to another. Books on diagnosis must go further than this; they must contain matter to which the busy practitioner can turn to refresh his memory from time to time and to

gain new points in the rapidly progressing science of medicine, and for new methods of interpreting certain well known and determining signs of disease. Well known and authoritative works on diagnosis need more or less frequent revising, even including new chapters, to keep abreast with present medical activities. Such an one we have before us in Da Costa's Physical Diagnosis which has had so wide an influence in medicine for years. We need not review this book in detail, simply call attention to the convenient new edition just issued by the Saunders Company.

PELLAGRA

Second Edition

By George M. Niles, M.D., Gastro-enterologist to the Georgia Baptist Hospital, Wesley Memorial Hospital and Atlanta Hospital, Atlanta, Georgia. Octavo of 261 Pages, Illustrated. W. B. Saunders Company, Philadelphia and London, 1916. Cloth \$3.00 Net.

The recognition of an increasing number of cases of pellagra in this country, more especially in the southern states, makes this a subject of great medical and national importance. The author has treated the subject thoroughly—having given rather exhaustive consideration to the history of the disease, its etiology, pathology, symptomatology and clinical course, diagnosis, prognosis, prophylaxis and treatment.

The writer seems rather definitely committed to the spoiled maize or corn theory of the etiology of pellagra. This attitude is modified somewhat by the rather convincing epidemiology data of Goldberger from which that investigator concludes that "the consumption of corn or corn products is not essential to the production of pellagra." Nevertheless the author seems to have failed to properly interpret Goldberger findings.

In the chapter under prophylaxis as in the one on etiology—the spoiled corn theory of the causation of pellagra is uppermost in the author's mind. He refers in detail to the precautions that have been urged more especially in Italy regarding the use of spoiled or moldy corn as food. He does not place sufficient emphasis, we believe, on the use of a well-balanced dietary as a preventive measure.

The valuable recommendation of Goldberger, namely "the reduction in cereals, vegetables, and canned foods that enter to so large an extent into the dietary of many of the people in the south, and an increase in the fresh animal food component, such as fresh meat, eggs, and milk," seems not to have been valued very highly by this author.

On page 230 he refers to the strengthening of our laws relative to the prevention of pellagra. This is being too hasty. Until we know more than we do concerning the cause and prevention of pellagra, legislation aiming at such would be unwise. This is the time to continue our investigations, and by publicity educate the people in regard to what seems

the best preventive against pellagra—as well as a good preventive against disease in general—namely the utilization of a well-balanced dietary. We should avoid the use of moldy or otherwise spoiled corn just as we avoid the use of spoiled food of any kind.

The book has numerous illustrations but many are rather poor.

All in all, the book is to be commended as a work that has brought together in a very readable volume, the existing knowledge of this very important disease.—Henry Albert.

CORRESPONDENCE

We publish this month, withholding the writer's name, the following letter from one of the active, efficient and wide-awake county secretaries. It is hoped that this will be read by every county secretary in the state and that there will be much profit therefrom.

"I enclose clippings, etc., referring to our late meeting of the county society. You will note the plan for Baby Week at the fair,

The sociability feature-banquet plus the ladies
The dental fellowship
The ovation to our dean
The papers on program
The "uplift" write-up.

You may notice that I am a little cynical on this uplift business but as I am secretary it seems the thing to do to push it. In the two clippings two phases of uplift are covered, namely dental prophylaxis, and giving the public a tip (in the style of W. A. Evans) as to how to judge a good doctor. In trying to get out the men to meetings I have been struck with the advisability of putting a premium on attendance by showing them up to advantage before the local public when they attend. In anticipation of this stunt I have the majority come with an assignment. By harping on this point I hope eventually to get the public to connect society work with their idea of a well posted doctor. The idea of working in the dentists is mainly to make the meeting a go. There is virtue in numbers. There is always a dependable four or five you know, usually office holders, or those who like to spiel who make it discouraging for humbler ones. These latter will pay dues but don't show up in meetings. And without them meetings will not continue as the old reliables will get to be tiresome. So our dentists not only break the monotony which they are glad to do, but they add bulk and go and interest too. I like to think of a coming meeting as guaranteed, as sure to come off, and not to fail for mere lack of a quorum which is a thing that may easily happen in counties where the usual attendance is about half a dozen."

SENATOR JOE ALLEN AT STILL COLLEGE

Commencement exercises for the Des Moines Still College of Osteopathy will be held in the college auditorium Friday evening, May 26. Senator Joe Allen will give the commencement address. There are forty-three graduates.

THE SEVENTH ALUMNI CLINIC OF THE COLLEGE OF MEDICINE

The State University of Iowa

The seventh Alumni Clinic of the College of Medicine was held April 11th and 12th under very favorable circumstances. First of all the weather was propitious. Next the attendance was record-breaking, nearly three hundred being present. The interest and enthusiasm from beginning to end was inspirational to the participants. From far and near came alumni, the extremes being not far from the border lines of our country. The class of '96 reported twenty of their number as present, being over 50 per cent. of the total number of their graduates. The enthusiasm of those present who answered "Here" reminded a few of the members of the faculty who were members then of a time when they answered with less enthusiasm to a roll call, "Not there." It is worthy of remark also with reference to this distinguished class that there are many very wealthy men among their number. These happy "Ninety-Sixers" contributed, later in the evening, not a little of the "pepper and salt" to the "smoker."

The program must be presented with the merest outline sketch of "what happened" during the two days assigned. It can not be presented even with resumes of the cases presented by the various clinicians who had charge of them. At eight o'clock of the 11th the clinical program opened in charge of the Dean of the College, Dr. L. W. Dean, who presented the following cases for operation and demonstration:

I. Operations—External curettment of frontal and ethmoids for chronic empyema of these sinuses; operation chronic empyema of the antrum of Highmore, two cases; tympano-mastoid exenteration; curettage of inter-arytenoid space of larynx by suspension method for tuberculosis of larynx.

II. Demonstrations—(1) Case of suppurative labyrinthitis with 11,000 cells in cerebro-spinal fluid followed by recovery. (2) One-half of mandible removed four months ago because involved by carcinoma. (3) Drainage of fluid from cerebello-pontine angle with no symptoms for a year. (4) Stricture of larynx following hemilaryngectomy, dilated by intubation tube. (5) Diverticulum of œsophagus. (6) Series of cleft-palate cases showing anterior and posterior clefts, hare-lip and post-operative results of same.

At 9:30 the much beloved president of the university Thomas Huston Macbride, was introduced. He delivered a most inspirational address of welcome which was not confined to the alumni of our college of medicine alone but was all-inclusive, taking into its circle every alumnus of every medical college of the land, and there were in actual attendance representatives of over twenty such. All were assured that the best Iowa has to give to its own alumni is always willingly shared with those whose standards of loyalty and support are equally as strong as our own.

At 10 o'clock Dr. C. J. Rowan and members of

his Staff of the Department of Surgery presented a clinic in Surgery with the following cases:

Operative—I. Lobectomy for simple goitre.

II. Sub-temporal decompression for brain tumor.

Demonstrations—I. Case of Irreducible Separation of the Epiphysis of the lower end of the Femur. Open operation one month previously.

II. Electrical Burn of the Scalp with resulting defect extending to the skull. Operation five weeks previously consisted in drilling holes to the diploe to supply granulations to denuded area.

III. Case of musculo-spiral paralysis following gunshot wound which produced fracture of the humerus and osteo-mylitis. Operations a year ago, first to remove the dead bone and get bony union of the fracture; later to connect the separated nerve-ends by a tube of fascia lata.

IV. Three cases of goitre: 1. Simple. 2. Toxic parenchymatous. 3. Exophthalmic.

V. Four cases of brain tumor, three of which had been operated, subtemporal decompression being done.

At 1 o'clock, after luncheon, a clinic in Dermatology was presented by Dr. J. B. Kessler and Staff. The following cases were presented:

I. Three cases of infantile eczema.

II. A case of ichthyosis.

III. Case of eczema, erythemato-papular.

IV. Case of molluscum contagiosum.

V. Case of lichen planus.

VI. Two cases of dermatitis seborrhoicum.

VII. Case of elephantiasis genitalis.

At 2 P. M. Dr. Beifeld gave a clinic in Pediatrics, at which were presented cases of "Congenital debility," "Congenital heart disease?" "Cleft palate and hare-lip," "Pyelocystitis," "Enterocolitis," "Tetany," "Tubercular adenitis of bronchial glands," "Motor aphasia," "Microcephalus," "Congenital defect of skull," and "Discussion of several cases of Pellagra."

At 3:15-4:30 Dr. E. C. Rosenow of Rochester, Minnesota, gave an address of exceptional interest on "The Elective Localization of Bacteria following Intravenous Injection."

From 4:30-6:00—Laboratory Demonstrations were given as follows:

I. Dr. Prentiss and Staff: Anatomy—"A Modified Renal Approach."

II. Dr. Albert and Staff: Bacteriology and Pathology.

1. Monstrosities and Malformations of the Fetus.

2. Method of Mounting Eye Specimens for Museums.

3. Gross staining reactions in pathological specimens.

III. Hygiene and Preventive Medicine—Dr. Albert and Staff.

1. Hook-worm Disease.

IV. Pharmacology—Dr. Chase and Staff.

1. Exhibition of Action of Drugs upon Mammals by entire class (Sophomore) in regular course of work, illustrating blood-pressure, cardiographic work, and diuretics.

V. Physiology—Dr. McClintock and Staff.

The determination of the respiratory quotient with use of the Benedict respiratory apparatus, and its use in determining the character of the Metabolism in normal and abnormal cases.

At 6:45 the alumni and their friends and the entire membership of the regular classes of the college were invited to repair to the Englert theater to witness a photo-play specially selected for their benefit. From there all gathered at the Armory of Co. A. where was given a very interesting program presented by groups from different colleges of the University. The Men's Glee Club led the way, followed by beautiful Folk dances under direction of the instructors of the Young Women's Gymnasium. A group of young men from the Glee Club at this point swarmed therefrom, got "dark in the face" and made all happy with plantation melodies and side-splitting jokes. An improvised medical orchestra made merry music, and a medical quartette supplemented by an exceptionally fine string-band with vocalists recalled repeatedly till both themselves and their repertoires were exhausted, added greatly to the happy listeners who were loath to have them stop.

Late in the evening the hour for the "Smoker" having arrived the ladies who had hitherto graced the occasion were regretfully excused and escorted to a confectionary where they were served a dainty lunch. The gentlemen remained for the "Smoker." The hour being very late but few of the alumni and guests who were present could be called for. The few who could did their subject well, led by a veteran of the college, Dr. O. P. Thompson, and followed by Dr. W. A. Rohlf setting the pace. Dr. Matson of Denver, Colorado, and Doctors Bierring and Fairchild, most heartily called out, made very happy responses, full of cheer and good-will. Like all good things however this happy occasion had to have an end, everybody agreeing with the poet who sang (somewhat paraphrased).

"And the night was filled with music,
And the cares that had vexed the day,
Folded their tents like the Arabs,
And as silently stole away."

At 8 o'clock, Wednesday, the second and last day of the Clinic, Dr. Alcock, of the Department of Surgery, presented cases related especially to Genito-Urinary Surgery, as follows:

I. A case of congenital absence of the sphincter of the bladder in a child (female), age five years.

II. A case of intermittent hydronephrosis with anuria, probably congenital absence of left kidney.

III. Case of double ureter and renal pelvis on left side, with kink of one ureter and resulting symptoms.

IV. Case of Rupture of urethra behind stricture, with urinary extravasation. Operated three weeks previously before clinic. Condition at present date good.

V. Case of Impotency of fifteen years standing, with symptoms of bladder-neck obstruction. All

symptoms relieved with return of all functions after removal of the Verumontanum.

At 9 o'clock Dr. Arthur Steindler, also of the Staff of the Department of Surgery, presented cases related to Orthopedic Surgery, as follows:

I. Operative:

1. A case of Infantile Paralysis, with Tendon Transplantation.

2. A case of Pes Cavus, corrected by operation.

II. Demonstrations:

1. Cases of Infantile Paralysis after operation.

2. Cases of Spinal Curvature in Abbott's casts.

3. Post-operative cases of Deformities in Hip diseases.

4. Post-operative cases of Knee-contracture.

5. Result of Whitman's operation.

At 10:30 A. M. Dr. W. R. Whiteis and Staff presented Dr. Joseph B. DeLee of Chicago who gave demonstrations of several cases, as follows:

1. A Fibroid tumor complicating Pregnancy.

2. A case of Eighth month Pregnancy with breech presentation, complicated with pulmonary tuberculosis in the stage of cavity formation.

3. Case of Pregnancy at Seventh month, complicated by mitral stenosis with decompensation.

4. Case of Primipera in First stage of normal Labor. (Demonstration made under Nitrous oxide anaesthesia.)

5. Case of Primipera in Second stage of Labor, with pre-eclamptic symptoms.

6. Two cases of Tubal pregnancy.

7. Case of Puerperal Endometritis.

8. Case of Puerperal Pelvic Peritonitis.

At 4:00-5:30 P. M. the same Department—that of Obstetrics and Gynecology—presented Dr. Palmer Findley of Omaha, who gave a clinic in the latter division of the subject, as follows:

I. Operative—

1. Supra-vaginal Hysterectomy for Multiple Fibroids of the Uterus.

II. Demonstrations—

1. Puerperal Pelvic Peritonitis.

2. Gonorrheal Salpingitis.

3. Procidencia.

Preceding the clinic presented by Dr. Findley, at 1:30-2:30, and 2:30-4:00, there were presented consecutive clinics by Doctors C. P. Howard, and Clarence Van Epps, as follows:

I. By Dr. Van Epps. (Both cord cases.)—

1. Subacute combined Sclerosis.

2. Pernicious Anemia.

II. By Dr. Howard—

1. Acute Nephritis, with studies in Nitrogen.

2. Central Pneumonia.

3. Myelogenous Lukemia—Two cases.

4. Pernicious Anemia—Two cases.

5. Tetanus.

The Clinic closed at 5:30 with an invitation to all to visit points of interest upon the campus. Many who came from long distances expressed great surprise at the marvelous changes which had taken place since they left.

COMING MEETINGS

A. M. A.

General Information

The American Medical Association will meet in Detroit, Michigan, June 12 to 16, and general headquarters will be at Statler Hotel.

Round trip from Des Moines will be \$28.24 and from other parts of the state in same ratio, or by adding \$15.00, if sufficient number desire to take the round trip by lake route from Chicago, the railway tickets will be honored and boat used instead of hotel, with breakfast included while in Detroit, and those desiring to go by water from Chicago, should write at once, to Dr. J. Rawson, Pennington, A. M. A. Chairman Transportation Committee, 535 North Dearborn St., Chicago.

Hotels and Dinners

Ample hotel accommodations have been made at \$2.00 to \$5.00 per day and all those interested should write, at once, stating the kind of reservations desired, to Hotel Committee, 33 High street, Detroit, Michigan.

Those wishing to attend any of the section or alumni dinners or smokers, should write at once, to Dr. G. E. Fay, Chairman, Detroit, Michigan.

Entertainments

Tuesday afternoon all the visiting ladies will be entertained by a reception at the Country Club.

The American Medical Golfing Association will hold a golf tournament on June 12.

The automobile committee has arranged with the various automobile industries of Detroit for ample automobile accommodations for all visiting physicians.

The visiting lady physicians will be given a banquet by the local women physicians June 13 at Hotel Statler, and the President's reception will be held at same place Wednesday evening, June 14.

Thursday afternoon, Dr. and Mrs. Torrey will give a lawn fete at their Grosse Pointe residence.

Thursday night, dancing party at the Palais, Friday afternoon and evening boat ride on the steamer Ste-Clair.

For further information, address this Journal or J. W. Cokenower, Des Moines.

The American Medical Golfing Association will hold its second tournament in Detroit at the forthcoming meeting of the A. M. A. in June. All fellows of the A. M. A. who play the game are eligible and may obtain the desired information from the secretary-treasurer, Dr. Will Walter, 122 S. Michigan Blvd., Chicago.

SOCIETY PROCEEDINGS

The Appanoose County Medical Society met at Drake Free Public Library, April 26. The program consisted of three subjects for general discussion. Cough: Its Causes and Treatment; Early Diagnosis of Pulmonary Trouble; and Treatment of Pulmonary

Tuberculosis. A large representation of the society's membership was present.

The Buchanan County Medical Society met at Knights of Pythias Hall, Independence, April 19. The scientific program was: Acute Pancreatitis, with report of a case; Dr. J. H. McGready; Pyorrhea from the Standpoint of the General Practitioner, Dr. H. H. Hunt; A Means of Increasing the Avenue of Approach to the Kidney, Dr. H. J. Prentiss, Iowa City. The out of town guests were: Dr. E. F. Stevenson, Waterloo; Drs. E. G. Dittmer and H. M. Bradley, Manchester, Dr. R. B. Hasner, Cedar Rapids and Dr. H. J. Prentiss, Iowa City.

The Cerro Gordo County Medical Society met at the Court House, Mason City, April 26, with twenty members in attendance.

In his talk on the subject, Some New Conceptions Applied to Old Problems, Dr. E. A. Graham explained some of the results he had obtained during his research of the last five years relative to the effect of poisons upon the human body, and how their work is to be counteracted.

Following this talk, Dr. R. E. Brisbane gave an interesting and instructive paper on Some of the Benefits to be Derived by Co-operation with the Dental Profession. He brought out the fact that the dentist should not only be a repairer of the teeth when decayed but that he should be consulted concerning preventive measures and it is his duty to know these measures.

The Cherokee County Medical Society held its regular monthly meeting in the offices of the State Hospital at Cherokee, Tuesday, April 25th.

A very interesting paper on Goitre was read by Dr. L. A. Wescott of Cherokee. Cases demonstrating the various types of Goitre were presented. After a general discussion of this subject, the staff of the hospital presented several cases for examination showing various heart lesions.

The Cass County Medical Society met at the Commercial Club rooms, Atlantic, April 19. There were present, Drs. Greenleaf, Thompson, Mullins, Graham and Campbell of Atlantic; Dr. Stults of Wiota and Dr. T. B. Throckmorton of Des Moines. In a memorial to the late Dr. T. B. Morris, of Atlantic, Dr. U. S. Mullins, presented a fine tribute to the character and professional ability of the lamented physician, and all present spoke feelingly of their associations with Dr. Morris. On motion, a resolution was passed authorizing the secretary to spread the memorial upon the minutes, copy of resolutions to be published in the Atlantic News Telegraph, and a written copy to be sent Mrs. Morris.

The remainder of the program consisted of the reading and discussion of the following papers: Report of Case of Puerperal Eclampsia, Dr. C. E. Thompson; Vaccine Therapy, Dr. M. F. Stults; Amyotrophic Lateral Sclerosis, Dr. T. B. Throckmorton. On motion, a resolution was passed author-

izing the secretary to correspond with the secretary of the Audubon County Medical Society with a view of holding a joint meeting in the fall. A vote of thanks was tendered Dr. T. B. Throckmorton for his interesting paper.

M. F. S.

The Dallas-Guthrie County Medical Society met at Dean Hotel, Panora, April 20 with program as follows: Myelitis, with Presentation of Case, W. V. Thornburg; Applied Eugenics, M. N. Voldeng. Reports of Cases. Diphtheria Carrier, Walter Blowers; Extra Uterine Pregnancy, W. L. Thompson; Abdominal Traumatism, J. W. Harrison; Interesting Case, B. H. Sherman.

The Grundy County Medical Society met April 10 at Grundy Center. The meeting was beneficial not only to those present but concerned the general public, as the best methods for the prevention of contagion and the spread of preventable diseases, were discussed.

The regular April meeting of the Marion County Medical Society was held at the Red Men's Temple, Bussey, April 20. After the business session, a well served dinner by the ladies of the Methodist church was enjoyed. The afternoon session convened at 2:30 o'clock for the scientific program as follows:

Dietetic Management of Constipation—J. T. Strawn, Des Moines.

Pernicious Anemia with Presentation of a Case—Corwin S. Cornell, Knoxville.

Relation of the Regular Practitioner to the Drugless Healers—J. J. Sybenga, Pella.

The Public Health—E. C. McClure, Bussey.

The Muscatine County Medical Society met in regular session at Hotel Muscatine, April 27. There was an attendance of twenty-five including several guests from nearby towns. A banquet was enjoyed at seven o'clock. Dr. Arthur Steindler and Dr. A. H. Beifeld, of the State University faculty, addressed the society. Dr. Steindler, had for his subject, Common Static Disorders of the Foot, illustrated by lantern slides. Some Special Features in the Diagnosis and Treatment of Diseases of Children, was the subject of Dr. Beifeld's address. Both addresses were profoundly interesting from a technical as well as a practical viewpoint. Among the out of town guests were: Drs. Cooling, Leith and Leith and Mason of Wilton, Hubbard and Overholt of Columbus Junction and Lewis of Columbus City and Muench of Nichols.

The Pottawattamie County Medical Society met at Grand Hotel, Council Bluffs, April 4. A very excellent luncheon was enjoyed at high noon, after which the following program was rendered: Dr. M. E. O'Keefe gave an interesting report of a case of Miscarriage in which no baby was found. Dr. A. V. Hennessey had for his subject, A Plea for a More Thorough Examination of the Female Pelvis, calling the attention of the society to the fact that

a great many times the physicians prescribe for a patient with symptoms referring to the pelvis without taking the time or going to the trouble of locating the real cause for the disturbance; Dr. E. A. Merritt gave a very interesting talk on Roentgen Ray evidences of Pulmonary Tuberculosis, illustrating same with plates from his laboratory. The talk was instructive and his radiographs demonstrate conclusively that many obscure or incipient cases may be quickly and accurately diagnosed by this method.

Dr. G. D. Cleaver read a very interesting and instructive paper on Scarlet Fever, discussing at length the various methods of handling this class of cases and called the attention of the society to several atypical cases. The program was very interesting and elicited free discussion throughout from the members present.

G. A.

Wapello County Medical Society March 7, 1916

Dr. J. B. Wilson's paper on Amenorrhœa, after defining it, related among the causes producing the symptoms, (a) Improper Development, (b) Atresia, (c) Infantile Uterus, (d) Absence of Uterus, (e) Absence of or undeveloped Ovaries.

The treatment of Atresia must necessarily be surgical, while cases in which the absence of flow showed a general below par condition, as in general anaemias or secondary anaemias due to tuberculosis or other wasting diseases, require fresh air, exercise, nourishing food, hematinics, cod liver oil, etc.

Dr. A. O. Williams in his discussion of Menorrhagia distinguished that symptom from Metrorrhagia, recited various causes; (a) Metritis, (b) Endometritis, (c) Subinvolution, (d) Prolapse, (e) Intrapelvic Disease, (f) Atheroma of the uterine vessels, (g) Constitutional Causes.

There are cases, eg.—blood discrasias and subinvolution in which medical treatment may be sufficient, but many are due to faulty position and conditions such as fibromata, some cases of metritis, malignant growths for which surgery must be resorted to, usually hysterectomy.

March 21, 1916

Dr. J. W. Elerick discussed intermenstrual hemorrhages under the title "Metrorrhagia"—giving among the local causes, Abortion, Benign and Malignant Growths—Subinvolution and among the general causes the Anemias, Infections, etc. He called attention to the facts that in unmarried women up to twenty-five years of age the bleeding is usually due to general causes; in unmarried women 25 to 40 to fibroids; and in parous women to local irritations; and passing forty to malignancy, which should be borne in mind, however in the younger. The prognosis and treatment depend on the working out of the primary cause. He put special emphasis on the perniciousness of blaming irregularities and hemorrhages occurring toward the end of the active sexual life on the menopause, so that valuable time and opportunities for correction are lost. Drugs have a limited value.

Dr. W. C. Newell's paper on Intermenstrual Pains

gave full a description of the development of the sexual organs and their blood and nerve supply. Dwelt on the importance of a thorough history of the case. To determine all factors within and without the pelvis that may have a bearing. Diseases of the neighboring organs may cause symptoms referred to the genital organs. Misplacements are a cause of pain; varicose veins of the broad ligaments may distress and many diseases of the pelvic organs and of remote organs may in a direct or reflex way produce pain felt in the pelvic region. Girls brought up to believe from hearing it frequently mentioned, that there is pelvic pain, will probably feel it. Rest in a horizontal position is an important element in treatment of many of the cases by reducing the engorgement of the part.

April 4, 1916

Dr. Maude Taylor classified Abdominal Ptosis as Acquired and Congenital. The former may be due to post puerperal causes, wasting diseases, tight lacing, etc., and can be helped by fattening, sleeping without a pillow, raising foot of bed, deep breathing and other exercises. She gave a review of the embryologic development of the abdominal organs, the occasional failure of forming junctures properly, gave Keith's Nodal theory of intestinal control; and dwelt upon the need of earlier teaching of deep breathing and developmental exercises to narrow, slender children to broaden their chests and overcome the below par condition. She conclude that surgical treatment of ptosis, stasis, etc. is not so popular as a few years ago.

Dr. J. C. Box treated of Neuroses, showing that they are more common in women, may come from a weak heritage or be acquired by a spendthrift use of nervous energy—that some shock or trauma may be the starting point; that certain drugs have their value, but put special stress on confinement to bed, freedom from exciting visitors and a milk diet for a time.

April 18, 1916

On this date the society was favored by having as an invited guest, Dr. F. M. Fuller of Keokuk, who discussed Obstetrical Accidents, but added as headings, Obstetric Negligence and Obstetric Ignorance. We often fail to put into practice our knowledge. Hasty deliveries are the cause of many of the pelvic traumata; we should not let our anxiety to get back to office jeopardize a woman's future health; Pituitrin may by forcible contractions cause tears. Forceps wisely used in other cases may be means of sparing the muscles. In post partum repair of cervical tears see to removal of cysts in cervix. Tell patient your services are not finished until she has reported for examination at your office two to three months after delivery, that any damage not repaired at the time may be discovered and given attention.

By being very thorough in the matter one may acquire a reputation for thoroughness and dependability that may enable him to charge fees for obstetrical services more commensurate with its value than are those usually obtained. The ridiculous dis-

proportion between obstetric and some surgical fees was mentioned.

Dr. Eppie McCrea of Eddyville summarized her paper on Curettage as follows: the use of the curette is rarely necessary in abortion, practically never after labor; is harmful in pelvic inflammation and often fatal in ectopic gestation. It is in a word a dangerous procedure unless controlled by careful limitations. The instrument is of value mainly for diagnostic purposes.

In the discussion which followed some did not condemn the curette so severely, some members stating that short fingers often made digital removal of uterine contents difficult.

E. T. E.

At the meeting of the Winneshiek County Medical Society held at Decorah, April 7, attended by the physicians and dentists and their wives, and also the nurses of the county, the following program was given:

Public Welfare—Amy.
Emergency Surgery—Clark.
Blood Pressure—Conrad.
Intestinal Hemorrhage—Dahl.
Medical Welfare—Daly.
Hydrocyanic Poisoning—Stabo.
Scarlet Fever—Thomas.
The Child's Teeth—Topliff (Dentist)
Scarlet Fever—Woodward.

Preceding the program a banquet was held at the Winneshiek hotel which was attended by the entire personnel of physicians, dentists and nurses with three exceptions. An incident of the banquet was an ovation given Dr. Harriette B. Amy, president of the Winneshiek County Medical Society in honor of her completion of forty years' practice of medicine. In introducing Dr. Amy, the county secretary, Dr. J. J. Daly, said in part: "One of our number has been a physician forty years. Medical events have been so numerous and significant during that time that merely to have lived and moved as an intelligent physician in active service while they were happening, is a distinction. It is our privilege here tonight to acknowledge and to honor the experience of such a physician in that environment."

The Iowa and Illinois Central District Medical Association held its regular spring meeting Thursday evening, April 13, at Rock Island Club, Rock Island. About sixty members attended dinner at the club previous to the session which was attended by about 120 members and guests, the local Dental Society being well represented. Dr. Billings of Chicago failed to keep his appointment but had arranged that Dr. Post address the meeting in his stead. Dr. Post delivered a most excellent clinic, didactic lecture, and lantern exhibit, all on the subject: General Infections from Focal Disease. Appreciation of his able handling of the subject was expressed to Dr. Post by a rising vote of thanks. This subject contains much material which qualifies as "new stuff" and it is one which is peculiarly general in its interest.

Revised constitution as previously read was adopted by the society in business session. The society was invited to meet with the local Dental Society Saturday, April 22. Invitation accepted. Next meeting will be a semi-centennial celebration in June for which occasion the committee offers an outdoor meeting and picnic near Muscatine. W. D. C.

The Northwestern Iowa Medical Society met in regular session at the Commercial Club rooms, Sheldon, April 26. There was an attendance of forty. The feature of the evening was a discussion of the various features of the Harrison law by Deputy Collector H. G. Higbee. An opportunity was given to ask questions and much interest was manifested. After the meeting the society adjourned to the dining room of the Hotel Arlington where a banquet was spread. The next meeting will be held in Sheldon in October.

MARRIAGES

Dr. Ralph W. Mendelsohn, formerly of Des Moines, to Mrs. Edna Gibson-Harriman, Des Moines, at Council Bluffs, April 8.

Dr. J. W. Donell, to Miss Emma Hill, both of Stanley, April 25.

BIRTHS

Dr. and Mrs. Bush Houston, Ames, April 10, a daughter.

Dr. and Mrs. T. F. Thornton, Waterloo, April 24, a son.

Dr. and Mrs. J. H. Wolfe, Kalona, April 21, a daughter.

Dr. and Mrs. W. S. Kyle, Shannon City, April 26, a son.

DEATHS

Allen Smith Chatterton, M. D., State University of Iowa College of Medicine, 1882; Fellow of the American Medical Association; member of Iowa State and Clay County Medical Societies; died suddenly at his home in Peterson, April 12, aged sixty-one.

Elihu L. Cook, M. D., University of Illinois College of Medicine, 1885; died at his home in Harlan, aged seventy-seven.

CHANGES OF LOCATION

Dr. A. E. Merkel, of Berwick, has located at Ankeny.

Dr. Howard Risk, of Waverly, has purchased the practice of Dr. R. C. Baker, of Oelwein, and removed to that place. Dr. Baker will go to Arizona.

Dr. I. C. Wood, of Logan, has removed to Omaha.

Dr. Chas. A. Manahan, of Brownsdale, Minnesota, has purchased the stock of the late Dr. E. B. Henderson in Marengo Hospital and will locate at Marengo.

Dr. L. T. Curry, formerly of Chicago, has associated himself with Drs. Alford and Bickley at Waterloo for the practice of pediatrics.

MEDICAL NEWS

Dr. W. J. Knebel, of Struble, will remove to Wyoming.

Dr. H. E. Jewell, of Coon Rapids, has been seriously ill with tonsillitis and erysipelas.

Dr. S. T. Gray, of Albia, has filed nomination papers for state senator from the 15th district.

Dr. and Mrs. C. E. Ruth, of Des Moines, have returned from a two months' trip to Porto Rico.

Dr. Donald Macrae, of Council Bluffs, has been appointed aide-de-camp for the department of Iowa, United Spanish War Veterans.

Dr. Mary K. Heard, of Iowa City, has resigned her position on the staff of the State University of Iowa College of Medicine, and will devote herself to practice in Iowa City.

Dr. A. O. Williams, Ottumwa, was the guest at a dinner given in his honor at Hotel Ballingall, April 25 by the Wapello County Medical Society in commemoration of his forty years' professional service in Ottumwa. Thirty-five guests were present. Dr. Williams was presented with a silver loving cup. During his forty years of practice in Ottumwa, Dr. Williams has maintained his office in one location.

A resolution calling upon Rupert Blue, surgeon-general of the United States public health service, to resign as president of the American Medical Association was introduced in the senate recently by Senator Works of California. The preamble of the resolution declared that the American Medical Association was engaged in forcing its own particular line of thought on medical science and that no government official should be associated with such an organization.

HOSPITAL NOTES

The Serving Sisters of the Holy Ghost of Techny, Illinois, have begun the erection of a new hospital at New Hampton. The structure will be practically fire-proof and modern in every respect, representing an outlay of about \$75,000.

Shenandoah is to have a hospital in the near future. The institution is to bear the name of its benefactors—The Henry and Catherine Hand Hospital. The provisions for the building of this hospital have been made by the will of the late Mrs. Catherine L. Hand, of Shenandoah, the bequest amounting to \$60,000, part of which is for the erection of the structure and the balance as an endowment for the maintenance of the hospital.

The people of Davenport were more than successful in their ten days' campaign to raise \$125,000 for the new St. Luke's Hospital. The expression of their efforts and generosity manifested itself in a sum amounting to \$130,000; \$29,000 of this amount was raised the last day of the campaign.

The Journal of the Iowa State Medical Society

Vol. VI

DES MOINES, IOWA, JUNE 15, 1916

No. 6

PRESIDENT'S ADDRESS—IOWA STATE MEDICAL SOCIETY

AN EXPERIENCE IN MEDICAL CO-OPER- ATION

W. B. SMALL, M.D., F.A.C.S.
Waterloo

Tradition and precedent have decreed that I address you on this occasion and from this decree there has seemed to be no honorable way of escape.

It was with real satisfaction that I served as your Treasurer for thirteen years, and it gave me great pleasure when you elected me your President. But I have experienced no such sensation, nor anything akin thereto, while preparing this paper, and I do not expect entire relief until I have finished reading it.

The subject which I have chosen to talk to you about for a very short time is An Experiment in Medical Co-operation.

At the spring meeting of nineteen hundred seven of the Blackhawk County Medical Society, a committee was appointed and instructed to go before the county board of supervisors at the April meeting, and to underbid anyone who put in a bid to do the county poor work. This committee went before the board of supervisors, secured the work at the price of the offer of the highest bidder and entered into an agreement with them for one year.

Under the terms of the contract the Medical Society was to furnish, through its members, to the sick county poor, including the county farm and the county jail, all necessary medical and surgical service, including medicine and surgical dressings, but excepting and not including attendance on cases of small-pox, and not including the furnishing of antitoxin for which the Society was to receive eight hundred thirty dollars per year, payable quarterly to the Treasurer of the Medical Society.

What was the reason for this committee being appointed at the April meeting? The custom which I believe is general throughout Iowa and

other states as well, and which plan seems to have received the encouragement of the county supervisors, has been for the physician, or physicians, wanting to do the county poor work, to submit sealed bids to the board of supervisors at their April meeting; the supervisors entering into contract with the successful bidder to do the work for the ensuing year.

The Blackhawk County Medical Society never had favored this way of doing the work, and in one way or another had always discouraged the practice; sometimes by getting every member to sign a petition agreeing not to bid for the poor work, sometimes by persuading them not to bid without formally circulating a petition, and again by passing a resolution at a regular meeting declaring that a member in good standing would not submit a bid,—of course the fellows who really wanted to put in a bid kept quiet.

The majority of the members had thought, and still think, that when the work is contracted to be done by one person, that the larger part of it is performed by the profession in general, leaving the minor or smaller part to be done by the contractor who receives all the monetary compensation.

On the other hand, the board of supervisors thought that when the work was not done under contract, but each physician being allowed to do what poor work he was called to do, rendering his bill accordingly, that they were at times imposed upon by the unscrupulous. This suspicion was, I fear, too often well founded.

The result of this contention between the supervisors and the Medical Society was not always conducive to the best interests of the party chiefly concerned,—the poor.

I very well remember on one occasion when the Medical Society had every physician lined up on a petition and they held fast, not one breaking away. The supervisors then contracted with the janitor of a Cedar Falls church who had received a license on account of having practiced the required number of years prior to the passage of the medical practice act.

However, the real immediate cause of the ap-

pointment of the committee was the discovery that a member of the Society who had formerly done the work had again bidden for it. It was then that a few of the boys got together and formulated the plan of the county society bidding for the work.

After two years, the physicians of Cedar Falls and Hudson preferred to make their own arrangements to care for the poor in their respective townships. This being the case, in nineteen hundred seven, the Waterloo Medical Society bid for and secured the work in the city of Waterloo and the townships in which it is located. The stipulated price was six hundred dollars per annum, payable quarterly.

The Society has received the contract for the work each year since, including the present one.

The Waterloo Medical Society was organized in nineteen hundred, for the purpose, originally, of sociability and the oversight of matters of local interest.

A few years after the local society began doing the work, arrangements were made to include small-pox cases, the detention hospital and the city jail, with a corresponding increase in remuneration. For the year nineteen hundred sixteen, twenty-two hundred and fifty dollars is the price agreed upon.

The avenue by which the sick reach the physician is through the overseer of the poor or any member of the board of supervisors. Formerly the poor had the privilege of calling, through the overseer, the physician of their choice among the members of the Society. The present arrangement of selection is to place in a receptacle the names of all willing members, excepting the specialists. The Secretary draws a certain number of names for each month's service, allowing a larger number for the months of heavier work. A schedule of the year's service is furnished to the overseer, the supervisors and each member of the Medical Society.

However, even with this arrangement the sick still have the privilege of calling the man of their choice, and this is also the manner of assigning the work among the specialists.

During the year 1912 a committee was appointed to revise the constitution and by-laws. This committee recommended incorporating, and asked for authority to incorporate as well as to revise the constitution and by-laws. This power was given them, and on January 25, 1913, the Waterloo Medical Society was incorporated, not for pecuniary profit, under the provisions of Title Nine, Chapter Two of the Code of Iowa.

As you may all know, we incorporated to be able to do business as an individual, and that

the individual members be relieved of any financial burdens arising from mismanagement or other causes, as would occur under an unincorporated society. An objection was made to incorporating on the ground that the laity would point to it as additional evidence of a "Medical Trust." No such charge has come to our ears.

With the proceeds, instruments have been bought, a club room leased and laboratories equipped. A full set of instruments was furnished for the operating room of the Presbyterian Hospital. They are kept in repair and are added to as requirements demand. The club rooms consist of finely furnished rooms suitably arranged for a meeting place. A large number of the leading medical journals are on file and a library has been started.

Röntgen Ray Laboratories have been installed in both hospitals and these are equipped with the latest apparatus and are owned jointly and equally by the hospitals and the Society,—the sole right of operating them resting in the Society. Ten per cent. of the gross receipts goes to each of the hospitals for electricity. The current expenses, which include the salary of an assistant, if one be necessary, are then paid, and the remainder is divided equally between the Röntgenologist and the Society. Thirty-five per cent. of the Society's share is set aside as an X-ray fund.

The clinical laboratory is centrally located in the business section of the city and fitted out with all necessary modern appliances. The Society was exceedingly fortunate in securing an experienced laboratory man, Dr. Guthrie McConnell, as director. He is guaranteed two hundred dollars per month and sixty-five per cent. of the earnings over and above the current expenses and the two hundred dollars guaranteed.

In the beginning, a röntgenologist was employed, but not being satisfactory, all the laboratories were placed under the supervision of the director of the clinical laboratory. Each laboratory is in charge of a committee of three which reports monthly to the Society.

The clinical laboratory began work November 1, 1915, and the Röntgen laboratories in January, 1916. The time of operation has been too short to give you any data of value in regard to their earning capacity. However, the earnings have been such as to encourage us and to lead us to confidently expect success.

This plan of taking care of the sick poor has been more satisfactory to the supervisors, to the poor and to the Society than the old way. We do not offer this as a perfect plan, but as a more excellent one, a practical one, and one which

presents many opportunities to the medical profession and to the people.

A lack of funds is one of the things which interferes with the work of any society. This method of supplying the funds has its advantages and disadvantages, but, as compared with any other method of which we have knowledge, it is superior.

In the beginning some of the members thought that we would be doing a large amount of work for very little pay. Now, practically all the members believe that they do no more work than they did under the old system, when one man got all the pay and they did the major part of the work without pay.

One of the problems of organized medicine is not only how to elevate the standard of efficiency but how to raise our ideals.

The plan outlined gives us not alone a way to obtain means to establish club rooms, suitable meeting places, libraries, and laboratories to increase our efficiency, but funds to secure men of character, eminence and ability to deliver to us a series of addresses that will add to our knowledge and raise our ideals until we shall place service first and fee second and we shall obey the master's command:

"Freely you have received, freely give," and then we may hear Kipling's message whispering in our ears:

When Earth's last picture is painted
And the tubes are twisted and dried,
When the oldest colors have faded,
And the youngest critic has died,
We shall rest—and, faith, we shall need it—
Lie down for an æon or two,
Till the Master of All Good Workmen
Shall set us to work anew!

And those that were good shall be happy;
They shall sit in a golden chair;
They shall splash at a ten-league canvas
With brushes of comet's hair;
They shall find real saints to draw from—
Magdalene, Peter and Paul;
They shall work for an age at a sitting
And never get tired at all!

And only the Master shall praise us,
And only the Master shall blame;
And no one shall work for money,
And no one shall work for fame;
But each for the joy of the working,
And each in his separate star,
Shall draw the Thing as he sees It
For the God of Things as They Are."

THE BACTERIOLOGY OF THROAT INFECTIONS*

FRANK J. HALL, M.D., Kansas City, Missouri

When I received the invitation to address the members of the Des Moines Medical Profession under the auspices of the Pathological Society, I had hoped that some greatly interesting material or some flash of inspiration would fall to me that I might make good in your sight. Neither of these happy things came my way and I am forced to present to you as best I may, some observations made upon the routine material falling into hand from sore throats.

No general practitioner will deny the fact that these cases occasion much professional anxiety and that throat infections are attended by great danger to the race. Laboratory men know that

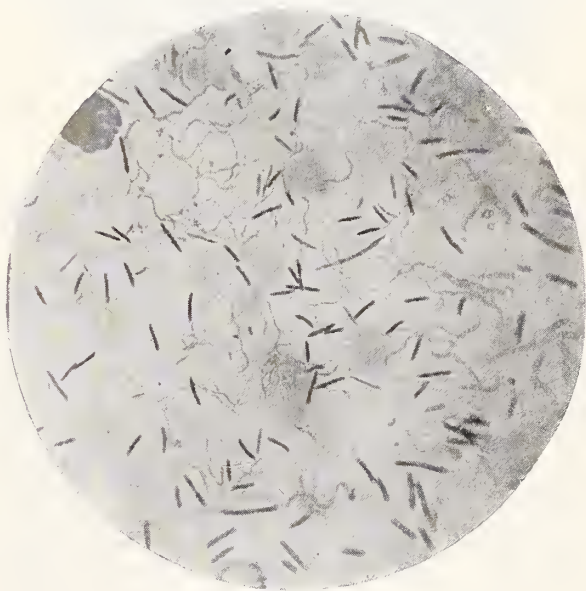


FIGURE I

Vincent's Angina—This type of infection may attack any part of buccal mucous membrane, nose, ear and sometimes the trachea.

the bacteriological diagnosis is by no means infallible, particularly when specimens are sent in by the practitioners. If I can point out the way to more dependable methods in studying throat exudates or clarify the subject in any way, I have justified my visit.

First as to methods: I have long since abandoned the cotton applicator as a means of obtaining throat material. This time honored instrument generally succeeds in getting only the superficial layer of exudate, which contains multitudes of individuals and species of unimportant mouth saprophytes, while the real bacterial species are

*Read before the Des Moines Pathological Society, January 28, 1916.

exercising their deleterious action upon the surface or beneath the surface of the living tissue sometimes far beneath the more or less thick exudate or slough or pseudo-membrane. In order then to study most accurately the true of-

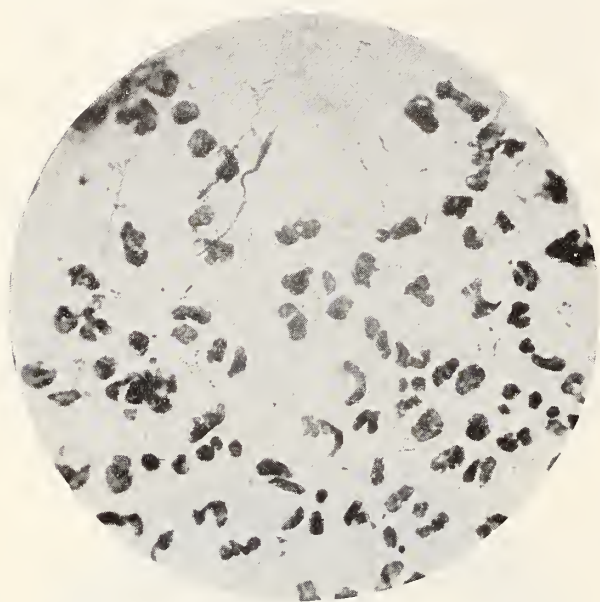


FIGURE II

Exudate from diphtheritic tonsillitis. Klebs-Loeffler bacilli in almost pure culture. Taken from depths of membrane.

fending microbes, it is highly advisable to rid the field of confusing saprophytic types. The patient, particularly if a child, must be firmly held; the field clearly brought into view, superficial mucus and bacterial matters wiped away with sterile cotton, then with a sterile spoon-curette remove a specimen comprising all the pseudo-membrane down to the living tissue. This spoonful of matter is then deposited on the wall of a sterile glass container, test tube or small vial with tissue side up. After a specimen is thus carefully secured, plants should be made as soon as possible upon appropriate media, using for these plants matters taken up with a platinum loop from the surface of our mass of material; this surface representing the layer of exudate that lay next to the inflamed tonsillar surface.

By using this preliminary technique, much time and confusion will be saved, as one avoids most bacteria, except those implicated in the process we wish to study.

After our cultures are made, several cover glass films are prepared for direct study. These observations of the direct smears are of great value in two ways: first, as in the case of diphtheria particularly, one may in most instances be able to render an immediate positive diagnosis, thereby saving much valuable time. Second, these direct smears serve as a check on the results of culture, especially in arriving at a judg-

ment of predominant organisms on the field of action.

Now a word about culture media. It has been my practice to use at least three media in studying throat exudates: First, Loeffler's blood serum; this is the premier and to my mind the only media that is safe for the cultivation of the diphtheria bacillus. There has been so much work done upon this germ, as grown upon this media, that its varieties are well known to every pathologist. Second, human blood-agar has proven of greatest service in the cultivation of the germs belonging to the pneumo-streptococcus group. Upon this media, maximum speed of growth is secured and at the same time the reaction of the colonies on the contained red blood is notable. As you know some streptococci hæmolyze the red cells about their colonies, some do not and some turn the blood pigments green. These changes arrange this type of organisms into sub-groups, which may finally lead to findings of clinical and therapeutic value. At present I can trace no difference in clinical behavior between the varieties of streptococci and pneumococci when infecting the throat. The third media used in this field of bacteriology is glucose-serum agar to be used when meningococci are to be searched for.

In all cases, fresh or at least moist media should be used and the tubes are better if at least five-eighths ($\frac{5}{8}$) inches in diameter so that at



FIGURE III

Diphtheria Bacilli in groups from the deepest layer membrane.

least three independent streaks may be planted from the same loop of original material, this securing one of the advantages of the plate method in that the last streak made usually presents material so dilute that colonies are far apart enough

to permit of being fished out and transplanted if found desirable. Cultures are impracticable in identifying Vincent's angina, syphilis and tuberculosis. These diseases must be diagnosed from direct smears or through other methods.

As to staining methods found most useful in preparing direct smears for microscopic examination, two stand out most useful in my hands: Eosinate of Methylene blue made up after the method of Wright (Wright's blood stain) and Ponder's stain. The latter is not so well known, but for its great value in staining for amœba and for picking out diphtheria bacilli in direct smear, it deserves to be called to your attention. The formula is as follows:

0.2-gram Toluidin blue, dissolve in 2-cc absolute alcohol, add 1-cc glacial acetic acid to 100-cc distilled water and mix.

To apply: use thin, thoroughly dried film, apply a drop of the stain, cover with a cover-glass, let stand one to two minutes, blot off superfluous stain without disturbing cover-glass and examine with oil immersion lens. The diphtheria bacillus is much more darkly stained than any other organism and shows a fine blue body and dark red granules. With even a little experience, it can hardly be mistaken for any other germ. Amœba, such as are present in pyorrheal pockets and other erosive processes in the mouth, stain deeply and distinctly in shades of blue, the inclusion

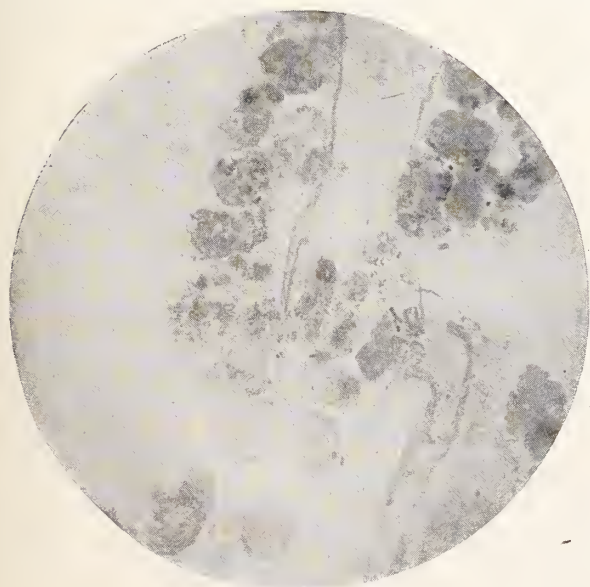


FIGURE IV

Streptococcus angina. Appears as short chains, often within the leucocytes, and as diplococci.

bodies dark blue—black. Permanent mounts may be made by gently sliding off the cover, drying without washing and covering with xylol balsam.

Wright's stain is capable of staining the pus-cocci, pus cells, the organisms of Vincent's

angina and others very clearly and beautifully. Its mode of application is well known to all who do any laboratory work.

In searching for *spirochæta pallida*, no staining method is trustworthy. When this organism is

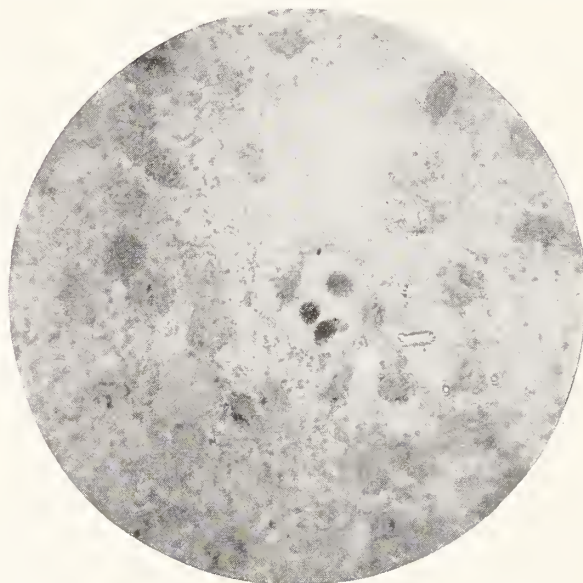


FIGURE V

Amœbic tonsillitis ending in gangrene and death. Large amœba in center of the field. Associated germs nondescript and a few cocci.

to be searched for, the lesion should be cleanly curetted down to a raw base. This is then to be cleaned of blood and mucus, then allow enough time for serum to ooze out, take this up with a capillary pipette and submit the serum to dark-ground examination. With the procedure outlined above, practically all the confusing mouth spirochætes are eliminated and nothing remains except the pallidum. In cases where chancre of the tonsil exists, there is often such a great amount of necrotic material present that this necessary surface-cleansing is impractical, then we must take recourse to the inevitably enlarged cervical lymph-nodes. Serum taken by thrusting a rather good sized hypodermic needle into a gland and withdrawing the piston of the syringe, the while rotating the syringe secures enough serum to use for dark-ground examination. I have succeeded in demonstrating the virus of syphilis in two cases of tonsillar chancre by this procedure. I have no doubt it will succeed in all cases. Late tertiary cases have to depend upon the history and the testimony of the Wassermann reaction for a diagnosis.

To demonstrate tubercle bacilli, the lesion must be curetted to such a depth that considerable quantity of cellular tissue is obtained. This is ground up in a test tube with the rounded end of a glass stirring rod, about one-half c.c. salt solution or distilled water added and the emulsion

centrifuged for ten minutes. The layer of finer deposit is taken up in capillary pipette, spread rather thickly on a slide, dried, fixed and stained with carbol fuchsin. The decolorization is done with Pappenheim's decolorizing solution of rosalic acid. The formula is as follows:

One part Rosalic acid is dissolved in 100-cc alcohol and then add Methylene blue to saturation, then add 20 parts of glycerine.

This method decolorizes all acid fast organisms that might be confused with tubercle bacilli, such as smegma bacilli, hay and butter bacilli, which might contaminate a throat ulcer. The sediment remaining is now heated at 60°C for one hour and the sediment injected into the peritoneal cavity of a guinea pig. Then thoroughly pinch the inguinal lymph-nodes. After ten days to two weeks if lymph-nodes are found enlarged, remove one under ether, cut sections and examine for anatomic tubercle and stain the tissue for tubercle bacilli. If these factors are present, the diagnosis is settled. If not, await the death of the animal and do a postmortem. Generally the direct microscopic examination reveals undoubted tubercle bacilli, if not you can drop back on the gland examination, if this fails you still have the animal for autopsy.

The object in heating the emulsion you intend to inject is for the purpose of killing the other germs or so attenuating them that the animal will not die of a suppurative peritonitis.

So much for the general methods of work employed in my laboratory. I have studied in the last two years two hundred fourteen cases of infected throats, falling into the following groups:

One hundred ten cases showed predominant streptococcus; of these, fifty cases showed non-hæmolytic streptococci;

Forty cases showed hæmolytic or greening colonies of the streptococcus Viridens type;

Twenty cases showed mixed types of colonies;

Twenty cases showed no streptococci, but were divided between staphylococcus types, particularly staphylococcus aureus and micrococcus catarrhalis;

Twenty-two cases showed diphtheria bacilli, ten in practically pure culture;

Eighteen cases showed typical diphtheria bacilli or direct examination of the exudate, leaving only four cases to be first diagnosed from the Loeffler's blood serum. These cases were so mixed with streptococcus and various mouth bacteria that the diphtheria bacilli were missed on direct examination;

Ten cases were Vincent's angina;

Twenty-five cases presented encapsulated pointed-ended diplococci that I regarded as genuine pneumococci;

Ten cases presented greatly mixed types of organisms amid which were leptothrix buccalis, mouth spirochætes, short thick curved bacilli and others of indeterminate species. These cases I have called cases of tonsillar mycosis, because I have no better name. These exudates fill the crypts with a dryish plug and spread in an indolent fashion around the swollen orifice of the crypt. This class of case is hard to cure by any local measures and recurs from time to time and usually is cured only by removal of the affected tonsil;

Five were secondary syphilis;
Two were tonsillar chancres;
One tuberculous ulcer;
One amœbic tonsillo-pharyngitis.

"ADDENDA"

I have taken a few micro-photographs that well illustrate some of the conditions described. The first picture illustrates a pure case of Vincent's Angina. You will note the long wavy spirochæta fetidus, staining with Wright's stain a light violent color, and the bacillus fusiformis, staining a dark blue-black. This smear was taken from a rapid ulcero-membranous angina that was mistaken for diphtheria, the case receiving some 40,000 units of anti-toxin without benefit. These cases are readily cured by carefully cleansing the ulcers of necrotic material and exudate by the use of pure peroxide on a cotton applicator carried to the point of revealing the red, raw base of the ulcer and then applying tincture of iodine.

Vincent's angina is occasionally so violent as to rapidly excavate the tonsil completely; to destroy the uvula and soft palate. Iodine is so specific as to render the etiologic diagnosis of great importance. This infection always presents the two organisms described and must be distinguished from other forms of sore throat or buccal membranous ulceration in which leptothrix and small mouth spirochætes figure. Occasionally the disease is accompanied by enlarged cervical lymph-nodes, thus simulating tonsillar chancre. The serum from such enlarged nodes does not show spirochætes under dark-field illumination as does syphilis, thus indicating the essentially local character of this interesting spirillosis.

The next figure, number two, illustrates the exudate from a case of diphtheria. Here the bacillus is shown in practically pure culture. The staining done by Ponder's solution shows the bodies of the bacilli a light blue, while the polar granules stand out in sharply contrasting red. In cases presenting considerable mixed infection, the diphtheria bacilli are by all odds the heaviest

stained of any in the field, thus enabling them to be readily picked out. It is of interest to note that as the deeper zones of the membrane are reached, the bacilli are more and more found in isolated groups as is shown in the next slide figure number three.

The correct laboratory diagnosis of diphtheria is so important, both to the individual and to the community, that I can not too strongly urge the spoon curette as the proper instrument for obtaining the material upon which direct microscopic examination, as well as cultural studies, is to be made. I am convinced that practically 100 per cent. correct laboratory returns would result with this simple change in the customary method of obtaining the material.

Figure four is taken from a smear made from a case of streptococcus angina. These cases fall into at least three groups: hæmolytic and non-hæmolytic streptococcus, streptococcus viridens (green colonies on blood agar plates) and true pneumococcus. All these types produce profuse exudates, which in some cases amounts to a pseudo-membrane equaling that in diphtheria with which it can be readily confused. It has seemed to me that the streptococcus viridens is more likely to produce the smallest amount of exudate and the greater degree of redness and to invade the larynx more frequently. It is well recognized that viridens infections in the tonsillar area carry great danger to the endocardium and to the joints. The non-hæmolytic streptococcus has seemed to me to be the infecting organism most frequently in the cases of greatest cervical adenitis with a great disposition to suppurate. It is interesting to note the concurrence in a family of streptococcus sore throat, scarlatina and erysipelas. Pneumococcus angina often presents at the outset, violent temperature movements, high pulse, herpes labialis and often in children, mild delirium very much as in lobar pneumonia, though I have not noted a material disposition to the development of a lobar pneumonia in these cases.

Figure five shows in the center of the field a large amœba containing three inclusion bodies. This smear was made from a unique case of gangrenous tonsillitis, fatal in three days to a vigorous girl of twenty-two years. The entire posterior portion of the mouth rapidly became black, dry and completely necrotic. From beneath a necrotic tonsil the smears were made from which figure five was made, showing the large amœba in the center of the field. The fresh specimen showed large numbers of very motile amœba, which were distinctly phagocytic both for red-blood cells and leucocytes. I report this case for what

it is worth without comment as to its essential etiology, except to remark that the general bacteriology was non-descript. The absence of streptococci or other recognizable pathogenic bacteria would leave most men to conclude that this case was essentially amœbic.

In closing, I hope that the demonstrations presented will stimulate a wider interest in the study of throat exudates.

1208 Wyandotte St.

PRELIMINARY REPORT OF HEALTH OF THE WOMEN STUDENTS IN SOME OF THE COLLEGES OF THE STATE*

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This preliminary report in simple narrative form, is submitted in hope of bringing out observations of other Iowa physicians. It may be proper to mention how this paper came to be written. In making examination of the women students in one of our denominational colleges preliminary to their gymnasium work, instead of finding incipient tuberculosis, neurasthenia and menstrual disturbances predominating, it was observed that out of the first one hundred girls examined, ninety-two had enlarged thyroid glands. This was so unexpected that investigation was made farther at every opportunity; and fortunately the work of the committee on health and public instruction often gave access to high school and college students; hence the data collected on the health of the women students in some of the colleges of the state, is now presented, no effort being made to explain this data at present.

The influence of higher education upon the health of women students has often been discussed by physicians and laymen; and by higher education, I mean that knowledge which is acquired after leaving high school. Many articles have been written to show the harmful effects of college life upon women's health, as manifested by disturbances in the menstrual function, dysmenorrhœa, and, in later years, sterility. For obvious reasons we cannot here discuss the incorrect logic of these articles appearing in the lay press.

When a girl has graduated from high school, she has been occupied from her fifth to her seventeenth year, and the study she has done during these twelve years is not only not harmful, but if given under proper home surroundings, is dis-

*Read before the Sixty-fourth Annual Session of the Iowa State Medical Society, May 12, 13, 14, 1915, Waterloo.

tinctly favorable to her health. What is there to fear from four years more of study, if the girl has average health and can enter college "without conditions?" Even granting that a girl has some physical defect—as scoliosis, or anterior poliomyelitis as one student had—then proper gymnasium work will materially improve or even correct the trouble, if given under scientific instruction and subsequent to a careful medical examination.

Notice, medical examination is mentioned, for though a number of our Iowa colleges have gymnasium instructors who give the best physical examination they can, still such examination will not have the value of one by a physician of experience. And out of the nineteen colleges in Iowa, eight only have medical examination of their girls preliminary to gymnasium work, as follows:

State University, Iowa City,
Iowa State College, Ames,
Drake University, Des Moines,
Morningside College, Sioux City,
Coe College, Cedar Rapids,
Simpson College, Indianola,
Penn College, Oskaloosa,
Tabor College, Tabor.

Of the remaining schools, eleven in number, three have physical examination by the instructor, sending the students to a physician if any suspicion of necessity for such examination arises, and these three are:

Iowa State Teachers College, Cedar Falls,
Cornell College, Mt. Vernon,
Grinnell College, Grinnell.

Grinnell and Central College hope to have medical examination required by next year.

Of the remaining eight schools, no report was received from Iowa Wesleyan University and only an incomplete report from Tabor College. The remaining schools require no examination by either instructor or physician as a preliminary to gymnasium work, and this group comprises:

Parsons College, Fairfield,
Central College, Pella,
Des Moines College, Des Moines,
Buena Vista College, Storm Lake,
Lutheran College, Forest City,
Upper Iowa University, Fayette,
Leander Clark College, Toledo.

Of the colleges having medical examination of the girl students, reports were kindly made by the instructors of physical culture, or the students were personally examined, as follows:

| | |
|-------------------------------|-----------|
| State University of Iowa..... | 110 girls |
| Iowa State College, Ames..... | 350 " |
| Drake University..... | 400 " |
| Morningside College..... | 169 " |
| Coe College..... | 289 " |

| | |
|----------------------|-----------|
| Simpson College..... | 571 girls |
| Penn College..... | 120 " |
| Parsons College..... | 47 " |

Total.....1,756 girls

These girls, with the exception of those in the last college, are examined by a physician on entering college and again on graduating, and any change meantime is noted on their respective cards; especially improvement in weight, in carriage, in constipation, menstrual functions, etc.

And from these reports we observe:

Girls normal and healthy, and weighing properly for their height, 74½ per cent.; under-nourished girls, 24½ per cent.; girls over-weight, 1 per cent.; girls with increased reflexes, of excitable, nervous tendency, 16 per cent.; goiter, 18⅓ per cent., no exophthalmic form observed although several gave history of it in other members of their family.

Menstruation—Irregular, chiefly over-time, 16 per cent.; dysmenorrhœa, 9 per cent.; one girl took laudanum, and one hypodermics.

Heart—Irregular and weak, 5 per cent.; murmur, 1 per cent.

Lungs—Cured tuberculosis, two cases only; suspected cases of tuberculosis, four cases only; chronic asthma, ½ of 1 per cent.; roughened respiratory murmur at time of examination, 8 per cent. The examinations were made mostly during February and March, at which time coughs and colds prevailed, hence this per cent. is unduly large.

Hay fever and catarrh, 1 per cent.; tonsils enlarged and fauces reddened, 5 per cent.; chronic constipation, slightly less than 8 per cent.; chronic headaches, slightly less than 2 per cent.; anterior poliomyelitis, one case; too much candy, two cases; one girl by proper diet gained twenty-five pounds during the school year; blood pressure ranged from 108-135, but the average ran about 120 mm.

Now from these facts, what do we observe? A smaller per cent. of incipient tuberculosis than we might expect, and very much smaller than we would have found 15-20 years ago. This lessened per cent. of tuberculosis very likely is due to the education of the public on the subject and to the rather new habit of the past fifteen years of sleeping with the window open in winter.

The menstrual disorders were only 16 per cent. and were greatly improved as a rule by proper exercise. For example take the two girls who were using opiates; one girl made the statement that her home doctor had given her laudanum, and that as it helped her she always kept a bottle on hand, and had brought a supply with her to

college; and not only used it herself "pro re nata" but had given some to her room mate and was advising her new friends to use it also. We my note here in passing, how nicely the Harrison law applies to this case. Although this girl would be unable to procure opium in the form of laudanum, she could still get it in unlimited quantities in the form of paregoric, as that contains less than two grains to the ounce; although

I admit, that if her gustatory sense be offended by the solution, she could not get it in tablet form (that represents ten drops of paregoric to the tablet), as obviously an ounce of them would contain more than two grains of opium. Nor could she use infant anodynes, as an ounce of such granules contains more than the allotted amount of codeine. It is apparent that there might still be innocently started a habit which would later lead to much mental and moral disaster, all through ignorance. The discovery of that one case, which might have acted as a nucleus to influence others of unstable nervous equilibrium in forming a pernicious, ever-tightening habit, was worth in human happiness alone the cost of the entire year's salary of the physical director in that institution. The other girl had been given hypodermics occasionally by her home doctor; so she said; of course we do not know of what they consisted, they may have been sterile water for psychological effect; but be that as it may, their respective physical directors had full sway over these girls, and by special attention and suitable gymnasium work, they both were greatly improved, so that they have had little dysmenorrhœa the past year.

We notice 16 per cent. with increased reflexes and a tendency to be nervous and easily excited. This group is composed of those individuals who often times "overwork at college and ruin their health." "Over-study" or "over-education," per se, has never injured any normal girl's health; but lack of proper food, insufficient sleep, improper exercise, too much social life, too little study, combined with worry and anxiety may produce the so-called "nervous breakdown," often wrongly attributed to over-education. The main factors in this condition are worry and anxiety; whether over financial problems, or over neglected lessons and on-coming examinations and fear of failure, or brooding over real or fancied wrongs.

The most striking thing, however, is the number of thyroid enlargements observed.

| | |
|-------------------------------|-------|
| State University of Iowa..... | 17.3% |
| Iowa State College, Ames..... | 11 % |
| Drake University..... | 12.5% |
| Morningside College..... | 7 % |
| Coe College..... | 12 % |

| | |
|----------------------------------|-------|
| Simpson College..... | 21.5% |
| Penn College..... | 12.5% |
| Penn Preparatory Department..... | 50 % |
| Parsons College..... | 21 % |

The instructor at Ames made the statement that she was greatly concerned over the apparent increase of goiter among the girls in her classes, and that she had to excuse six girls from gymnasium work because of severe goiters.

The preparatory department at Penn College does work equivalent to a high school, and the ages of the girls ranged from fifteen to eighteen years, hence the large per cent. of goiter among these adolescent girls. None of the girls at Penn had thyroid hypertrophy so great as to be disfiguring, as did some at other institutions, and in fact only thirteen had even moderately enlarged glands, the others were only slight enlargements. One girl in the junior class said she had exophthalmic goiter three years ago, but got better after a year's rest and resumed college work; but this year she has lost twenty pounds and was beginning to feel oppressed and tired and noticed that at times her heart beat too fast and made her feel nervous and "quivery." Two other girls had very prominent eyeballs, widening of the palpebral fissure, a slight divergent strabismus and inability to converge, tremor of tongue, could feel tremor when hand was placed on shoulder, rapid pulse, slight goiter, and both looked under-nourished. Both gave history of simple goiter in other members of their respective families. We must however take into consideration the apprehension of the examination, which might in a measure account for the rapid pulse.

Simpson's high per cent. is perhaps due to the fact that she has in her gymnasium classes many girls from the Indianola High School, ranging in years from fourteen to sixteen, who come to the college to get intelligent muscular training under the every efficient and scientific supervision of the instructor of physical culture in that institution.

I wish here to add results obtained from personally examining 410 high school girls as follows:

Albia High School, 84 per cent. goiter, 21 per cent. enlarged tonsils and reddened throats. Indianola High School, 73 per cent. goiter, 57 per cent. enlarged tonsils and reddened throats; Hutchinson's teeth in a colored girl, age 18; this examination was made in February at which time coughs and colds were prevalent, and would account for the unhealthy throats. Garden Grove High School, 80 per cent. goiter, 80 per cent. enlarged tonsils and inflamed throats; Hutchinson's teeth in a girl aged 8, this examination was also made in February and most of these girls had colds. Derby High School, 80 per

cent. goiter, 15 per cent. enlarged tonsils. Average for goiter in high school girls 81 per cent.

These per cents. for goiter seem quite large and worthy to be presented for the consideration of this Society. The question naturally arises, "How many of these goiters in adolescent high school girls will resolve naturally to normal size in a few years, and how many of those of college women will also return to normal?"

Among these 1756 college women, we find 18 per cent. with goiter, 16 per cent. with excitable temperaments, 5 per cent. with irregular hearts, 16 per cent. with irregular menstruation, and 25 per cent. under-nourished. It may be pertinent to note that the girls with goiter, or irregular hearts, or nervous temperaments, were not allowed to take heavy exercises or to play basketball, or anything that would excite or exhaust them.

The question of "what per cent. of these seemingly simple goiters will change to the toxic form" arises naturally, for the statement has been made that every goiter, however benign, is potentially an active goiter; and that "the malignant aspect of hyperthyroidism is very frequently superimposed on a benign aspect." Benign goiters by being actively treated with iodine preparations often are converted into toxic non-exophthalmic goiters. Many girls know that iodine will decrease the size of goiters, and with or without a doctor's advice, purchase it in proprietary medicines advertised in papers, and apply it themselves. Iodine often reduces the size of a goiter by causing absorption of thyroid secretions, and by this action increases hyperthyroidism. The onset of a severe attack is often dated from the time of beginning a vigorous daily medication; as for example, a high school teacher with a small goiter came into my office with tremor, tachycardia, excessive sweating, and a sense of fatigue and exhaustion, dating back two weeks previously when another teacher with goiter advised her to begin treatment also, and generously divided her supply of tablets and tr. iodine, with the disastrous effects just mentioned. All medication was stopped, and as it was near Christmas vacation, two weeks quietude were advised; this regime resulted in the toxicity disappearing, and the teacher was able to resume her work; but with some new ideas about goiters and a fear of self-medication in her heart. If the thyroid gland in this case had enlarged because it was working overtime due to a deficiency of thyroid products, then the iodine treatment would have been proper.

Of course these figures on goiter are based on scarcely 2,200 girls, grouped within a small radius; but it is very probable that the conditions true of this local group may exist elsewhere.

In summing up it may be stated with a fair

amount of confidence that the legitimate demands of college life cannot be considered as an essential factor in chronic ill health or nervous breakdown of college-bred women; but that the average girl with proper supervision of sleep and diet, with intelligent gymnasium training, is really benefited physically by a college course.

The girls have regular hours of sleep and systematic employment. Their food is as a rule well chosen, their social life is usually regulated with intelligence—more so than they wish sometimes, and they have the euphoria which comes from mastering difficult mental work. Their studies are limited in the number that they can take at one time, based on the result of the physician's examination.

The reports universally show that disturbed menstrual functions are improved by proper gymnasium work, only a small minority showing no improvement; instruction on diet, baths, sleeping with the windows open, dressing properly in winter, etc., all combine to assist in this present wave of public health education.

Medical examination of girls preliminary to gymnasium work is to be advocated in all colleges, that they may be developed to their greatest capacity, physically and mentally, for a trained brain needs a healthy body to assist it. These girls are the mothers of the future, and biologically speaking, "the greatest human achievement is to bear and rear children." To bear children women need health, to rear children women need intelligence, and these two qualities are not incompatible; and our colleges should aim to promote not only dissemination of knowledge, but health and morals as well.

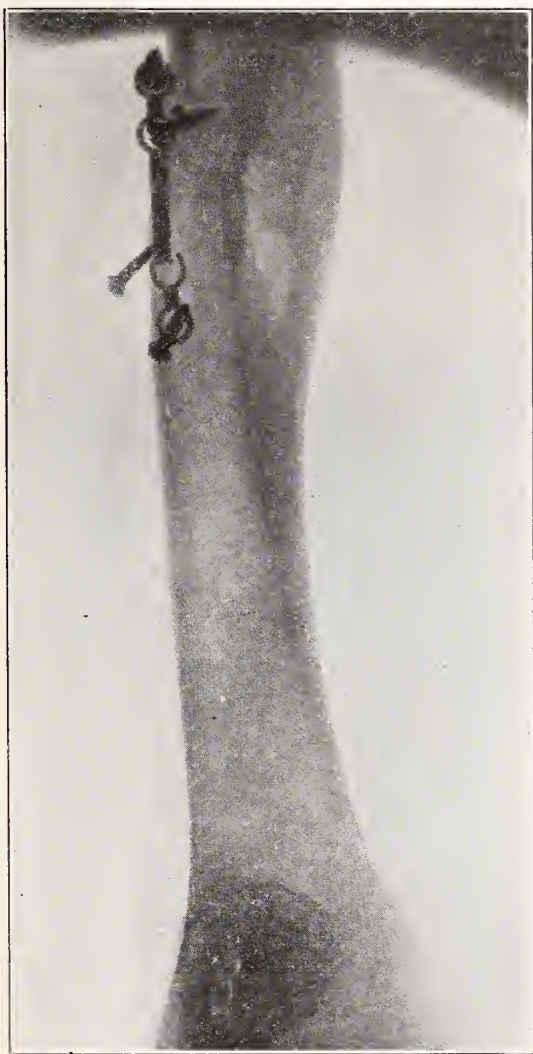
As a rule the colleges and high schools were anxious to assist in any scientific investigation desired; and some, as necessity arose, even dismissed their women students from recitations that they might be examined. In one college, however, my chapel talk was limited to five minutes, and the following forty-five were devoted to yelling and singing in a "Booster Meeting." This student body evidently was made up of embryo doctors to the exclusion of preachers, since they believed in exercising their lungs instead of listening to talks about the same, apparently believing it was better to "practice than to preach."

In closing I wish to express my indebtedness to those physical directors who so kindly sent data and copies of the report cards used in their respective gymnasiums, also to those institutions that permitted me to make examinations of their women students, and likewise to our president who extended to me the privilege of examining the girls in the high school of his city.

THE USE OF LANE'S PLATES IN THE TREATMENT OF FRACTURES OF THE FEMUR*

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Since the beginning of the antiseptic era of surgery, many mechanical appliances have been



CASE I

Case of non-union plate broken ten days after operation. X-ray two years after operation. No inconvenience from broken plate.

used upon fractured bones to hold the fragments in apposition. Silver wire, ivory pegs and clamps made of steel, have been used. In the long bones wire does not hold the ends of the bone in as good apposition as some rigid or non-yielding substance, such as a steel or bronze plate.

The use of clamps and ivory pegs have become nearly obsolete. The principle of the ivory peg is however being revived by the transplantation of bone taken from a remote region and being placed in the medulla of the fractured ends, where it acts as a splint and also as the origin for the development of new bone.

In 1905, Mr. Lane of London stated that for several years he had been using steel plates upon all fractures of long bones in which he was unable to make a satisfactory reduction. Since that time he has stated that he is now plating virtually all his cases of fracture.

There are but few surgeons who would go so far as to claim that the operative treatment of all fractures is a justifiable procedure. There is however, without question, a proper field for such work. In cases of non-union and cases where a fairly good reduction cannot be accomplished, the operation is indicated; provided the patient's general condition is such that the risk of the operation is not too great.

Murphy claims that the plates hold the fragments so firmly together in cases of non-union



CASE II

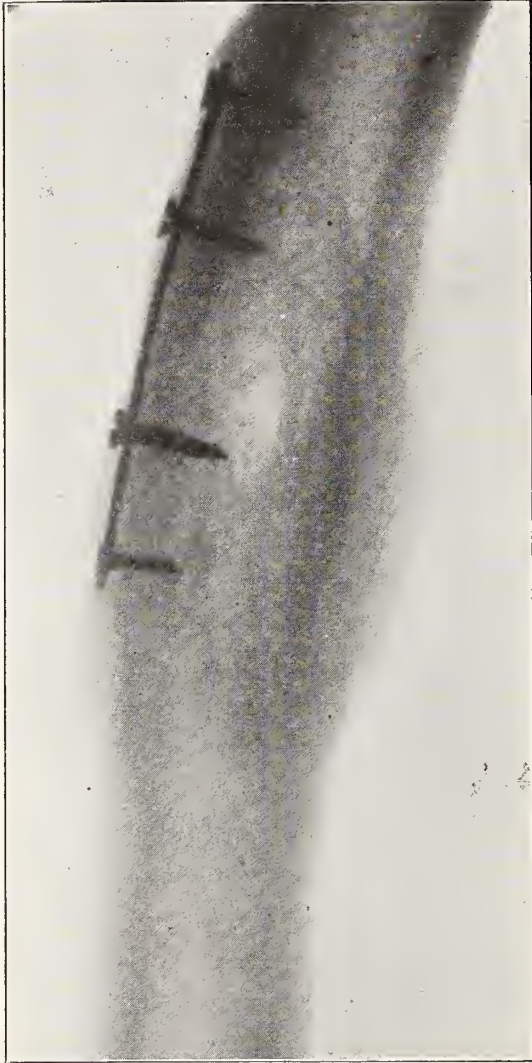
Faulty union at margin of fragments only. Great amount of callus. Photograph poor.

that they frequently do not unite and that in this class of cases it is better to use a bone transplant. There is no question, however, that a large number of these cases of non-union do unite properly when the plates are used, provided the fractured

*Read before the Sixty-fourth Annual Session, Iowa State Medical Society, May 12, 13, 14, 1915, Waterloo.

ends are well freshened and correctly approximated.

It is claimed that there is always some delay in union and delay in callus formation in all



CASE II

Groove for plate chiseled in callus. Operation fourteen weeks after original injury. X-ray taken twenty-two months after operation.

fractures treated by the open method. This is due to the disturbance of the circulation in the ends of the fragments caused by the handling of the different tissues.

In compound fractures, especially where from the nature of the injury infection is to be expected, it seems to be the consensus of opinion that Lane's plates should not be applied, at least until after the danger of infection is passed.

It is bad surgery to apply plates or to wire bones in the presence of infection, as the infection will follow down the screws and wires giving rise to necrosis of the bone and not only defeating thereby the object aimed at, but causing destruction of bony tissue and endangering the life of the patient.

The operation is indicated more frequently in

fractures of the femur than in fractures of any other bone. In fractures of the femur we are much more apt to get shortening than in other bones as it is so often difficult to maintain the fractured ends of the bone in apposition.

Shortening in the humerus is not nearly so important as in the femur; for when the arm is short the patient learns to make allowance for its shortness and in a little while suffers no inconvenience from the defect. This, of course, is not possible with a short lower limb. In the leg if only one bone is broken, the other acts as a splint. When both bones are broken it is generally easier to get the fragments in good position and keep them there than it is in fractures of the femur. Of course there are fractures of the leg where good apposition cannot be made.

There has been much discussion as to the time



CASE III

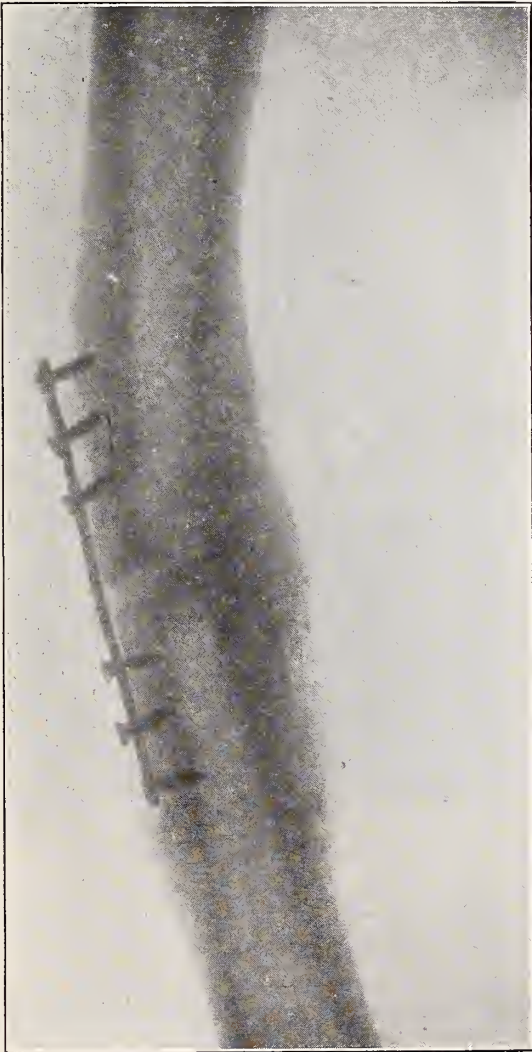
After attempts of reduction under ether.

when the operation should be performed. Some men claim that the operation should be done as soon as it is demonstrated that a good reduction cannot be accomplished. Others claim that it is

better to wait until five or seven days have elapsed since the injury, as there will be no changes take place in the bone in that length of time, and the soft tissues will have recovered somewhat from the trauma incident to the injury and will be in better condition to withstand infection.

I have operated within forty-eight hours of the time of injury and also after longer periods of time, and have been unable to see any difference in the results, but must say that the arguments for waiting a few days appeal to me to be good, and where it is possible to wait until after the soft tissues have recovered somewhat from the trauma, think that it is a good plan to do so.

It is claimed that the plates may give trouble after an indefinite period of time. However if



CASE III

X-ray fourteen months after operation. Screws have pulled up some without bending plate.

no ill results within eight or ten weeks, the object of the plate, retaining of the fragments in apposition, will be attained, and the plate can be removed, leaving a good useful bone.

The great bugbear of all bone surgery is infection. Bony tissue will not resist and take care of infection to any thing like the same extent that the peritoneum, especially the pelvic peritoneum



CASE IV

X-ray taken after attempts at reduction under ether.

will. If the least infection occurs, the plate and screws act as foreign bodies; pus forms and a discharging sinus will persist until they are removed. The greatest care should therefore be exercised to prevent infection.

It is well to have the limb scrubbed with soap and water several times during the twenty-four or thirty-six hours preceding the operation. It has been my practice to have the limb scrubbed the last time several hours before operation and then dressed with a dry sterile dressing. When the patient comes into the operating room, before the anesthetic is administered the limb is well painted with iodine. This will give the iodine at least fifteen or twenty minutes in which to act.

The iodine is applied in the operating room because one is there more sure of the handling of the limb aseptically than if it is applied in the

room by nurses. Operator and assistants should wear gloves. Even the gloved finger should not be inserted into the wound but all the work in the wound should be done with instruments which have not touched the hand or the skin since being boiled.

A long incision is necessary to get the required exposure. After the bone is exposed, a reduction is made by traction upon the limb and manipulation of the fragments with some long instruments such as long screw drivers or Murphy's bone skids.

A large number of appliances in the form of single or double clamps are made for the purpose of holding the fractured ends of the bone together while the screws are being placed. I have some of these clamps but have not had much satisfaction in their use, being able to hold the bone in better position by the use of long instruments such as the blade of an obstetric forceps, two long screw drivers or bone skids. The screws are put in place after drilling holes in the bone. The screws should be long enough to penetrate to the medulla and should be driven down far enough to make the plate fit tightly to the bone. The wound is closed without drainage. The split muscles may be united with a few sutures of catgut but these should not be tied tightly. The fascia is sutured over the muscle with catgut. It is essential that the hemostasis be absolute, otherwise the result will be jeopardized by the formation of a hematoma beneath the skin.

I had the privilege of seeing Mr. Lane operate three years ago when he was in Chicago. He makes his incision with a long knife and appears to be extremely careful not to get near the patient; in fact he stands away from the table in such a manner as to appear awkward, but he completed the operation with neatness and dispatch. Mr. Lane attaches sterile towels to the margin of the wound by means of clips as soon as the skin incision is made.

After the operation the limb must be dressed in a manner that will not permit of motion and that will not allow of any strain upon the plate. A plaster cast is generally applied. If the fracture is of the femur, the cast should reach from the heel to the waist. It is well to leave a window in the cast over the lower angle of the wound so that it can be inspected and the dressing changed in case there is much oozing.

As yet I have had no cases of infection; but will say that in these cases I always feel much easier after the lapse of a week or ten days and the patient in good condition.

The work of reduction of the fracture and applying the plates is hard at times. At times it is

easy to make the reduction and hard to apply the plates, and then again it may be very difficult to make the reduction and comparatively easy to apply the plate.

One should be careful to use a heavy enough plate, especially when working upon the femur as the strong abductor muscles tend to draw the upper fragment outward. Then too a strong plate well applied is a guard against injury from the dropping or handling of the limb. The



CASE IV

X-ray taken seven months after operation.

screws should not be placed too near the edge of the fracture as when so placed the bone may split and the screw not hold.

Wm. R. Jackson in an article appearing in the March, 1915 number of *Surgery, Gynecology and Obstetrics* on the "Operative Treatment of Fractures," gives his conclusions as follows:

1. When plates are used, they should be placed on the fleshy side of the limb and not subcutaneously.
2. Screws should fit snugly and hold the plate tightly to the bone.

3. If it ever became necessary to remove a plate, it was due to the fact that the plate was not properly placed or the technique was faulty.

4. It is not always necessary to remove a plate when infection has occurred.

5. That plating of fractures does not always mean bony union, as this fails to occur in some cases, even after bone-transplants are used; these are the "non-union" cases. If a little callus forms after ten months, union may confidently be expected. If fifteen months fail to show any callus formation, then we decide that it is a "non-union" case.

6. Compound fractures should not be plated until converted into simple ones.

7. Shortening of the limb always follows plating in chronic or "ancient" fractures because of the necessary resection of the ends of the fragments for coaptation.

With these conclusions we can all agree, but we also know that if the infection in the wound is in any degree virulent or deep seated, that the plate will have to be removed.

Recently I began to try to get hold of all the cases in which I had used Lane's plates and to get skiagrams of their fractures taken. This was done so as to see what the results were after varying lengths of time, I wanted to find out if I could learn some better way to do the work than that in which I had been doing it.

The study of these skiagrams has been highly interesting to me, and I will show you three or four of them, simply to emphasize the errors that were made in the application of the plates and in the after treatment of the cases. You will note that in all these femurs there appears to be a bowing outward. This may be due to several reasons.

1. The natural outward curve of the bone.
2. The reduction may not have been quite perfect.
3. The plates may not have been applied to the bone firmly enough.
4. It is partly due to the appearance of the callus.

All of our cases except the first two have been dressed in plaster Paris following the operation. It is impossible to apply a cast so snugly that there will not be some room within the cast, especially after the swelling subsequent to the operation subsides.

Although the appearance of the skiagrams would seem to indicate that there was shortening in these femurs, yet in only one can shortening be demonstrated by measurement, and strangely enough this one is the skiagram in which the bone appears most perfect. The functional re-

sults in all the cases are good. You cannot detect a limp in the walk of any of these patients. In the case referred to, the shortening is but very little, not more than a half inch.

Case 1—Lester Arnold, Morning Sun, Iowa, Age fourteen. Seen November 15, 1912.

Ten weeks ago he fractured his left femur. Fell from a tree. This case had been dressed in extension with weight to foot. At the expiration of ten weeks the dressing was removed and it was found that he had no union. Examination revealed a fracture in middle third of femur. Operation November 15, 1912. Long incision. Lower fragment back. Upper fragment forward. Fascia removed from between fragments of bones. Ends of bone freshened. Lane's plate of four screws applied. Wound sutured. Gauze drain. Dressed upon double inclined plane. Ten days later patient upset the double inclined plane. There was immediate bowing outward at site of fracture. Extension with weight to foot was made, a long side splint applied. The splint was so padded that it caused pressure where the bone curved outward, thus keeping it in line. From this time on we had no more trouble as the wound had healed nicely.

This was my first case. We knew, of course, that the screws had pulled out or that the plate had broken. The skiagraph shows that both things had happened. Fortunately this boy recovered with a good limb. Measurement of limb does not reveal shortening. Firm union resulted. The mistakes in this case were:

1. Using too small and too weak a plate.
2. Defective method of dressing following operation.

Case 2—Walter Dotson, Newport, Iowa, age twenty-two. Seen January 8, 1913.

September 13, 1912 fell from a scaffold to sidewalk, a distance of about seventeen feet. Fracture of right femur at about junction of upper and middle thirds. After fourteen weeks began to walk. Says he had over four inches of shortening. His physician says he had over three inches of shortening. January 6, 1913 while running, he stepped off of a sidewalk and bone was broken again. There was great deformity. Operation January 10, 1913. Plane of fascia removed from between ends of bone, ends freshened. Callus upon the outer surface of upper fragment was so great that it was necessary to chisel a groove in which to lay the plate. Dressed in extension with long side splint. You will note that at this time I was not yet sure enough of my asepsis to put the limb in plaster. This is the case in which the limb appears most perfect in the skiagrams, but is the one in which there is some shortening. He walks without a limp and has been doing farm work since he recovered.

The next two cases illustrate what we most often encounter in fractures of the femur. They may be termed the ordinary cases that require operation.

Case 3—Orville Peel, Wever, Iowa, age sixteen. Seen March 14, 1914.

Was thrown from a horse. Right thigh injured. Fracture of right femur at junction of upper and middle thirds. Reduction attempted under ether anesthesia. Fragments could not be approximated. March 19, 1914, limb shaved and scrubbed. Scrubbed twice on March 20, 1914. Scrubbed again March 21, 1914. Painted with iodine. Operation March 21, 1914. Fragments approximated with considerable difficulty. Plate of six screws applied. Plaster from ankle to umbilicus. Firm union in twelve weeks.

Case 4—Edward Steiner, Lomax, Illinois, age twenty-three. Seen April 11, 1914.

April 8, 1914 a wagon ran over his right femur. Satisfactory reduction could not be made under ether anesthesia. The regular preparation for operation. Operation April 13, 1914. Fracture in middle third; oblique in character. Reduction quite easy but considerable difficulty in applying plate. Plate of six screws. Plaster of Paris dressing. Firm union in twelve weeks.

In all these cases of which I have shown you photographs, there was something either in the application of the plate or the after treatment of the case, which was not perfect.

The reason that these cases in which there is some defect in the mechanical part of applying the plates or in the conduct of the after treatment, are shown you, is that it was thought that more benefit could be derived from the study of the mistakes made, than from the exhibition of a number of perfect photographs.

The fact that in these four cases the functional results were good, does not warrant us in being satisfied with imperfect technique.

ECZEMA*

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Eczema is a disorder peculiarly important to the general practitioner, first because of all skin diseases it is the one most frequently diagnosed, and therefore among those of most common occurrence; and secondly, it presents many problems in diagnosis and treatment which are both puzzling and annoying, and which may have a material influence on his professional success. The title of this paper is chosen not with the intention of discussing the subject in full, but rather with a view of permitting the selection for consideration of certain practical features at random, without the restriction which would be imposed if the title were more limited in wording.

The term "eczema," which means literally, "to boil forth" is very old. It has been in use, without any constant uniformity of significance, for about 1400 years. Aetius, living in the sixth cen-

tury A. D., applied it to conditions which were apparently furuncular or carbuncular, characterized by heat and burning, rather than by itching and moisture. After many centuries of evolution, the steps of which we need not follow in detail, a significance has been reached which is covered in the following definition, taken from one of the latest treatises on dermatology:

"Eczema is an acute, subacute or chronic inflammation of the skin, beginning as an erythema, or by the appearance of isolated or grouped papules, vesicles, pustules, occurring in uniform, multiform or modified types, upon a reddened, generally infiltrated base; accompanied by more or less intense itching and burning sensations, resulting in catarrhal symptoms, and crusting, in infiltration and scaling, and leaving after complete resolution no cicatrices."

This formidable array of words required to define a term of six letters might inspire the laity with a respectful awe for medical wisdom, but it is not the source of the very evident fear of eczema which is held by the people. Every physician has had addressed to him the anxious question: "But it is not eczema, is it doctor?" This dread may have arisen from the inclusion under the diagnosis "eczema" by the physicians of past generations of many other disorders more or less incurable; or it may be that the therapy of eczema in the past has been so deficient as to have become in the popular mind traditionally unsuccessful. Whatever may be the explanation, the fact remains that the dread of the disease is a factor which must be reckoned with if the patient is to be kept in a wholesome state of mind. To this end the physician is justified in avoiding the term in every way possible. This is not a difficult matter since the word "dermatitis" can be substituted without an undue sacrifice of scientific accuracy.

This brings us to one of the most debated points in the whole subject of eczema: How is it distinguished from dermatitis? Dermatitis means, of course, inflammation of the skin and, strictly speaking, has a very broad application in dermatology. Practically, however, the word alone stands for a group of conditions produced by the action of mechanical, chemical, thermal, and actinic agencies upon the skin. The resultant inflammatory reaction varies, according to the nature and extent of action of the cause, from a slight erythema with little subjective sensation to extensive vesication, pustulation, bleb-formation and tissue destruction, accompanied with itching, burning or pain in varying degrees. The fact that somewhere in this scale of symptoms of dermatitis may appear the clinical picture of eczema as set forth in the definition of that term, has led to endless confusion with respect to the

*Read before the semi-annual meeting of the Hardin County Medical Society, Eldora, Iowa, December 14, 1915.

proper differentiation of the two, and has greatly complicated the presentation of eczema in the text-books.

There are approximately four positions assumed in the books on this point:

(1) That a clinical distinction between eczema and dermatitis is in many instances very difficult, if not impossible to make; hence it is expedient to base the separation of the two on causative factors, that is, eczema is due mainly to internal factors, the external elements not being apparent, while dermatitis arises from obvious external causes, and disappears promptly when these are removed.

(2) That eczema is a parasitic affection beginning usually as a dermatitis and becoming an eczema only with the invasion of the lesion with certain microorganisms.

(3) That eczema is merely a clinical form of dermatitis having certain definite characters; when these are absent the condition may not be called eczema.

(4) That there is no essential difference between the two.

These devices for convenience of presentation are worth a closer scrutiny.

To call a certain clinical manifestation upon the skin an eczema if the causal factors are mostly internal, and a dermatitis if they are obviously external, is arbitrary and unscientific, and must be regarded as a makeshift solution of a difficult problem. Diagnosis under this plan is dependent upon the discovery of etiologic factors; eczema is supposed to be named if no external cause can be found, and this diagnosis is subject to sudden change if by any chance an externally acting agent is discovered. The clinical picture obviously has little to do with the situation. A case which illustrates these unsatisfactory features is the following:

A woman from the better walks of life presents herself with a vesicular eruption involving the fingers and portions of the dorsi of the hands. It appeared rather suddenly, and was the seat of considerable burning and itching. There were a few very small papulo-vesicular lesions about the wrists and forearms. On inquiry it was found that she was at the menopause; was a hearty eater at table, enjoying especially the heavier meats and rich desserts; she was subject to articular pains at times, and the fingers showed arthritic changes. She did no housework, and could give no information as to an external cause. It was therefore considered a case of eczema in a person of gouty tendencies, leading an indulgent life, and passing through the menopause. Under treatment the condition slowly disappeared. Shortly thereafter a recurrence took place. This time, however, she was able to report the cause with certainty: The attack developed immediately after

handling a Japanese primrose, a plant long recognized as a provocator of dermatitis.

Thus a diagnosis of an eczema-like eruption as eczema on an etiologic basis alone, suddenly falls to the ground, and the case becomes simply a dermatitis venenata. Nevertheless, in this instance it is not possible to assert that internal factors played no part in the condition, or that the remedies directed towards them contributed nothing to the recovery. One cannot escape the belief that the menopause and the so-called gouty diathesis must contain etiologic possibilities for the skin, but exactly what these are cannot be said with certainty. There is nothing more elusive than the internal cause in the diseases under consideration, but they may be counted on as existing in every case. Further, experience tends to support the idea that in every instance external factors are operative though often not easily revealed. It is safe to say that practically every case—call it eczema or dermatitis as you will—has in its etiology, internal or endogenous, and external or exogenous elements. A true differentiation cannot be grounded on a preponderance of one over the other.

At this point we may profitably digress a moment to consider that rather indefinite something called predisposition. The factors in this are endogenous, and are not well understood at present, though the future promises much in this direction. We know that the dry keratotic skin in xerosis is vulnerable as shown by the constant tendency of these individuals to dermatitis; that the thin, tender skin of infants and of some adults is of low resistance; that a skin which has gone through a sharp attack of dermatitis becomes more vulnerable as a result of that experience, probably because of an anaphalactic process which sensitizes the skin to certain irritants. We know, too, that toxins of internal or external origin can render the skin vulnerable as shown in the vascular instability and in the wet, soggy hands so often found in those who use tobacco in excess. An interesting but disputed phase of predisposition is termed the "exudative diathesis." This is said to be a congenital anomaly, hereditary, with rather indefinite characteristics. It is discoverable in childhood, but is not surely recognized in adults. City life favors its development. Two types are noted: One, the puny delicate, the other the fat and robust child. These children are said to show an increase of reaction to uncleanness, to excess of fat in food, and to overstimulation of the nervous system. Symptoms are referable to the skin, the respiratory system and the body weight. These are the babies, it is claimed, who early become victims of eczema

seborrhoicum of the scalp, who develop irritation about the cheeks, attended with marked itching, and who show a great tendency to intertrigo. It is highly probable that the last word has not been spoken relative to this condition.

The parasitic theory of eczema finds its principal champion in Unna, who promulgated his views in 1890. They were revolutionary at that time, but today are not so regarded. His definition of eczema is as follows:*

"A chronic, superficial parasitic inflammation of the skin, characterized by itching, scaling and a tendency to diffuse spreading; having the property of responding to irritation with sero-fibrinous exudation; epithelial overgrowth, hyperkeratosis, and disturbance of the sebaceous and sweat secretions, or with a combination of these effects."

It will be noted that by this definition the disease is chronic; the exciting organism does not invade the sound integument, but enters only where the skin has been damaged by mechanical, chemical or traumatic agencies. Spread is by autoinoculation, and the entrance into a new terrain tends to increase the pathogenic power of the organism. Recurrences arise from the persistence in places of nests of parasites which are awakened again to activity. An outbreak of eczema is favored by anything that improves the soil and facilitates entrance for the organisms, such as the acute exanthemata; itching skin diseases (with certain exceptions); dermatitis from mechanical, thermal, actinic or traumatic causes; maceration of the skin from urine, sweat or pathologic discharges; insufficient oil in the skin, either congenitally or from the excessive use of soap; and other conditions and things. The form which the eczema takes is determined by the inherent quality or constitution of the skin, of which he distinguishes several types.

Unna's eczema parasites are not fully agreed upon. One of them is the bacillus of Sabourand, also called the acne-bacillus of Gilchrist; another is the so-called flask-bacillus of Melassez, and a third the morococcus of Unna. But these last two are now believed to be merely forms of the staphylococcus.

The parasitic theory of eczema is extremely interesting and attractive. It is plainly not an easy matter to prove that an organism is the specific cause, since a lesion so superficial is certain to contain many germs of various sorts. Nevertheless it must be said that increasing attention is being paid by dermatologists to the microbic element in eczema and dermatitis, and in fact in all skin diseases. Year by year an increasing number of human diseases is being

transferred from the column of doubtful etiology to that of definite microbic causation. Already the role of focal infection has been proven in two abnormal skin conditions, namely, Erythema nodosum, and Herpes zoster, and doubtless others will be added to the list.

A parasitic cause for the type termed eczema seborrhoicum, also called dermatitis seborrhoica, is not seriously questioned by the majority of dermatologists. Its regions of selection are the scalp, forehead, about the nose and ears, the neck, axillæ, flexures of elbows and knees, and about the groins; the lesions have a brownish color, and tend to form bulky, greasy scales and crusts. Unna points out that the regions affected are areas heavily supplied with sweat and oil glands. The manner of extension, the type of lesion, and the frequency of a concomitant furunculosis, all strongly suggest a germ causation. In two instances known to the speaker, eczema seborrhoicum with a distinct pustular tendency, was cured with a vaccine cultured from lymph nodes taken from the neighborhood of the lesions, with all precautions against contamination. The organism found was the staphylococcus, of the variety aureus and albus, respectively. This finding, in connection with the present view of the flask bacillus and the morococcus, suggests that the staphylococcus may be found to be a factor in eczema far more extensively than has been suspected heretofore.

The conception of eczema as a narrow clinical entity, the manifestations of which must fall within certain definite lines, might be satisfactory if generally accepted. Under such a view the subject would not occupy the extent of space given it in the texts. In fact the question might be worth considering whether the word "eczematoid" as a qualifying adjective in connection with dermatitis, might not be used as a substitute word for eczema to designate those cases in which the clinical expression conforms to the definition of eczema.

If the position is taken that there is no difference between eczema and dermatitis, consistency would seem to call for the abandonment of one term or the other in the interests of simplicity and clearness. Of the two, eczema as the narrower clinical term would be the one discarded. For presentation of the subject, qualifying words and phrases would have to be devised for proper description, and among these might well appear the term "eczematoid."

What then shall the practitioner think of eczema? His best interest will be conserved if he will bear in mind the following points:

The significance of the term eczema is in a

*From Unna-Block, Hautkrankheiten, Berlin and Vienna, 1908.

state of flux and its fixation must be an achievement of the future.

That the differentiation of eczema from dermatitis is not clearly presented in the dermatological treatises which are his sources of information; which indicates that the authorities themselves are not in agreement on the matter.

That the term "eczema" is a source of fear to the laity and the avoidance of its use by the physician is justifiable, and readily accomplished by the substituting of the word dermatitis.

That a differentiation of eczema from dermatitis is not truly essential, if the importance of etiology is understood in laying out a plan of therapy for the case.

Every case demands a thorough search for internal and external causes, since both may be assumed as acting, this search to be not for the purpose of diagnosis, but for assistance in effectual treatment.

That proof of a microbic element in the etiology of eczema is increasing, and germ action should be recognized as a possibility in every case.

This brings us to the question of treatment.

Any disease for which a multitude of therapeutic measures are proposed is usually hard to cure. The array of remedies offered for eczema is so great that one who is not experienced in skin therapy is bewildered and unable to make a rational choice. A full discussion of the subject of treatment is not possible nor intended in this paper. Some practical hints, however, may be of value.

First, search diligently for etiologic factors, and remove them as promptly and completely as possible. Generally speaking, external causes are more easily found and removed than internal causes, and should receive first attention. Keep in mind the fact that countless opportunities for insult are present for the uncovered portions of the body, especially in those who toil. Seek to find the reasons why the skin is vulnerable and correct these to the best of your ability. Nature is a kind and competent healer, ever at work, and if causes are removed, she will bring recovery with comparatively little assistance.

Protection is essential in every case. The skin is thereby saved not only from the original excitant of trouble, but also from those lesser contacts which for the sound skin are innocuous, but for the disturbed skin are sources of irritation.

In selecting remedies for local application in acute cases be guided by the dictum: "Do not further irritate an irritated lesion." A second might be added: "When in doubt, don't." For

acute and weeping conditions, soothing remedies must be selected and stimulative applications omitted. It often happens that the physician is uncertain as to what action he may expect from the medicaments useful in skin affections, and so is forced to some experimentation with his patient, the result of which may not be all that could be desired. In this matter the following suggestions may be useful to the general practitioner.

Alkaline lotions, alone or in combination with nondrying oils, are soothing. The official linimentum calcis, or "Carron oil" is not a good application in these cases, on account of the drying qualities of the linseed oil contained therein.

Water, soap and water, and alcohol solutions are irritating. Cleansing must be accomplished by use of oil.

If itching is a distressing feature, carbolic acid in $\frac{1}{2}$ to 2 per cent. strength is the best antipruritic available for use in lotions. It must always be combined with some glycerine to facilitate solution. A carbolized lotion must not be used as a continuous wet dressing except with the greatest caution; and where the weeping area is large, the percentage of carbolic used must be low, to avoid toxic effects.

Menthol is not available for lotions on such surfaces since it requires alcohol for its solution.

Pastes containing a large proportion of insoluble powder should not be used on weeping or pustular surfaces, or on hairy regions. The scalp, beard and pubes require simple ointments or lotions without much sediment.

Chronic eczema, with infiltration, epithelial overgrowth, and hyperkeratosis, calls for a stimulating therapy, quite the opposite from that suitable for the acute form. Restoration to the normal will not occur without a whipping up of the indolent tissue, hence stronger remedies *per se*, or larger percentages of the weaker sort are indicated. As to the most commonly used of these medicaments:

Salicylic acid is extremely useful. In $\frac{1}{2}$ to 2 per cent. it stimulates the re-growth of epithelium and is very helpful in the later dry stages of the acute form. Above 3 per cent. its action is rather to destroy epithelium, and in such strength its field is in the chronic cases.

Sulphur finds its greatest use in the seborrhoeic type of eczema. It may be used alone or in combination with salicylic acid. Sulphur in 5 per cent. strength is preferable to the 15 per cent. official unguentum sulphuris. Ichthyol contains a larger percentage of sulphur and has a similar action.

Ammoniated mercury is very helpful in pustu-

lar forms of eczema and may be used up to 10 per cent. strength. It should not be mixed with sulphur in ointment combinations.

Tar is a stimulating, antipruritic remedy which is never to be used in acute cases, but is well suited to chronic infiltrated conditions with intense itching. Preparations of tar should always be used with caution.

Green soap is a valuable admixture to salves where a resolution of epithelial overgrowth is desired. Its effects should be watched.

X-rays are very useful in the chronic form; they must be used with caution and with a clear understanding of their power to do damage.

With respect to new remedies, put forth as exceptionally superior, one should use them with great care, until their value is established.

Lastly, the physician must not forget that in removing the external cause, and in protecting the involved areas, he may seriously jeopardize the patient's economic status. This is especially the case in the worker whose hands have suffered injury from his work. To remove the cause would in many instances be equivalent to taking him away from his livelihood. To protect him against the cause while at work is at times impossible, and very often a wholly unsatisfactory effort, which is apt also to separate him from his work. When restoration has been accomplished recurrence is probable when the cause is again put in operation. Age and circumstances may preclude a change of occupation. Under such conditions the patient's plight is a serious one and should spur the physician to his best efforts. In fact, in no domain of medicine is the need of the social viewpoint more emphasized than in the field of dermatology.

CHRONIC PANCREATITIS*

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The pancreas is much more often the seat of functional disturbance than is generally realized. Not a few of the obscure conditions of the intestinal tract, particularly those grouped under the diagnosis of "indigestion," "auto-intoxication," etc. are really pancreatic disease. On account of the obscure anatomical location and the lack of studied observation,—chiefly the latter,—the diseases of the pancreas are rarely diagnosed except at autopsy.

According to etiology there are two forms of chronic pancreatitis, the biliary and the non-biliary. The biliary form receives its infection from the bile tract, the non-biliary from the in-

testinal tract—both however directly through the duct of Wirsung. Histologically two types of pancreatitis are distinguished (Opie, *Dis. of the Panc., Its Cause and Nature*, 2nd. Edit. 1910). First, the interlobular, in which type the change takes place in the connective tissue which runs between the lobes. In the interacinar, or second type, the connective tissue proliferation takes place between the acini. In the interlobular form the islands of Langerhans are involved late, while they are likely to be involved early in the interacinar form, with the symptoms of diabetes as a consequence.

Obstruction of the ducts, tumors of the head of the pancreas, biliary and pancreatic calculi, arterio-sclerosis and syphilis are cited (Forchheimer's *Thera. of Int. Dis.* Vol. III, p. 29) as causes of pancreatitis. Gastric, pyloric or duodenal ulceration may easily give rise to a localized pancreatitis. Pressure of the head of the pancreas against the common bile duct, gives rise to chronic jaundice and is a fairly common type. In such an instance the diagnosis of cancer is extremely difficult. It is even possible for the swelling to take place so that the ducts of Wirsung and Santorini are obstructed, causing exclusion of the pancreatic ferments, trypsin, steapsin and amylopsin, from the duodenum. In this instance the fatty-stool will be observed. But in most cases there is neither jaundice nor fatty-stool to diagnose the pancreatic disease, then it is that the clinical diagnosis is most difficult.

The diagnostic symptoms which may lead one to suspect a chronic non-biliary pancreatitis are: first, a history of digestive disturbances with pains in the upper belly and right hypochondrium, less frequently in the left. Second, the rapid loss of flesh; third, anemia secondary to the emaciation; fourth, slight suggestion of jaundice; fifth, slight bulging above the umbilicus with rigid rectus muscles and excessive fat in the stools. If the head of the pancreas is palpable it is firm, rough and most likely tender. When the stomach is inflated this tumor disappears. If the head of the pancreas, on account of the swelling, shuts off the bile ducts, deep jaundice, biliuria and clay colored stools are added to the picture.

Symptoms of pancreatitis vary widely. This depends upon the part of the gland diseased. The cases diagnosed clinically are most always complications of affections of the biliary ducts, in which instances the symptoms of the pancreatitis are so masked by the cholecystitis that they are scarcely recognizable. I saw a striking illustration of this a short time ago. A man was sent into the hospital tagged "gall-bladder sur-

*Read at the Fortieth annual meeting of the Southeastern Iowa Medical Society held at Washington, Iowa, Nov. 18, 1915.

gery." General peritonitis was evident, with the causative pathology located somewhere in the right upper belly; the history was of gall-stones and the acute picture was one of ruptured gall-bladder; but dullness in the flanks led me to suspect a complicating pancreatitis. - Operation revealed multiple biliary calculi, the head of the pancreas enlarged and hard, and reddish colored fluid in the free peritoneal cavity.

When the clinical diagnosis of right upper abdominal pathology is to be solved, the history of the physical signs evident to the senses of sight, hearing and especially touch, aided by the laboratory and the knowledge of perverted physiological chemistry will make the diagnosis of chronic pancreatitis more than a guess. If we really wish to clinch the diagnosis of a chronic pancreatitis we must study the secretions and the functional activity of the pancreas. With the duodenal tube the external secretions of the pancreas can be easily obtained for study. This method of examination for pancreatic ferments is distinctly more reliable than stool analysis.

There are a number of tests for ascertaining the functional activity of the pancreas which only prove that no one test has satisfied the rigid demands of both pathologist and clinician. The tests fall into three groups and are briefly: first, tests of the external secretion of the pancreas usually carried out on the stool (Fuld-Gross, trypsin determination) and depends on the fact that undigested casein is precipitated by acetic acid, while digested casein is not; or on the urine—(Wohlgemuth) which is a test of diastase, 1 c.c. of urine being allowed to act on a starch solution and compared with the "normal"; or on the gastric contents (Volhards oil test), which method is based on the fact that normally there is slight regurgitation of pancreatic juice into the stomach. Second, tests of the internal secretion, consisting of tests for glycosuria, the Cammidge reaction, the Loewi' pupillary dilatation test, etc. Third, metabolism studies in absorption of fat, nitrogen, etc., from the intestinal tract.

The Cammidge reaction, which depends on the presence in the urine of an unknown substance, probably a carbohydrate, according to recent investigations, occurs in other conditions than pancreatitis and is not always present in cases of pancreatic disease. The Loewi' test consists of instilling into the eye a 1:1,000 adrenalin solution. If dilatation of the pupil takes place within an hour, pancreatic insufficiency is said to exist. I recently observed this phenomenon in a case suffering from diabetes mellitus. There is no available explanation of the reaction.

There is little uniformity of opinion as to the virtue of the tests of the external secretion of the pancreas. Most observers advise the using of more than one test. Crohn (Arch. Int. Med. Vol. xl. 4 p. 581) considers lipase the most variable, trypsin the most constant and therefore the most reliable single ferment index. From his studies he deducts that most cases of pancreatitis and some diseases in a neighboring organ cause a diminution of the external pancreatic secretion and that mild interlobular pancreatitis and pancreatic new growths which do not obstruct the ducts, do not diminish the power of this secretion.

Metabolism studies in the animal and absorption observations in the human, so far, have failed to instruct us conclusively whether the external secretion of the pancreas is essential to good intestinal absorption or not. Crohn thinks that the degree of interference with intestinal absorption is dependent on organic disease or functional derangement of the parënychma or working part of the gland, and that the pancreas normally controls intestinal absorption by its internal secretion. This internal secretion is called hormone. To substantiate the hormone theory, many workers report marked improvement in the absorption of fat and meat fibers following the feeding of raw pancreas of a pig or sheep or the gland extract. This improvement, Crohn states, cannot be due to the ferments contained in the raw gland for they are too scant.

My personal studies of the duodenal contents by the means of the duodenal tube, although few, have been very interesting and instructive. I have noted that the aspirated contents are generally a light-yellow color, transparent or translucent, and are alkaline in reaction. When the contents are turbid the reaction is acid—due most likely to an admixture of gastric juice. I use the tube dry and have the patient swallow it when the stomach is empty. The stomach secretions are immediately aspirated to be examined and compared with the duodenal juice later. Two hours later aspiration is again performed, and if the contents contain no bile, another two hours is allowed to elapse. In one case of severe pyloro-spasm the bulb was in the stomach nine hours before it passed into the duodenum. In this and in another case, bright-red blood was obtained as soon as the nozzle passed the pylorus, which substantiated the clinical diagnosis of pyloro-duodenal ulcer. In another instance, a case of marked jaundice, there was not a trace of bile in the duodenal juice aspirated, although amylpsin, trypsin, and steapsin were present.

Obstruction of the bile ducts somewhere above the pancreatic duct-opening was obvious.

The examination of feces as a routine, as compared with that of urine, is not popular. This is a mistake. Fecal analysis is not laborious, neither is it uninviting if we are really looking for "the trouble." A short time ago I saw a nine year old boy who had had his urine examined repeatedly for a long time with sugar always present, but his feces had never been examined. When examined the stool was copious, grey and greasy (fatty-stool). No physician is too busy to examine a stool, at least, with the naked eye.

TREATMENT

In the treatment of chronic pancreatitis, as in all other diseases, the slogan is to find the cause and remove it if possible. Any inflammation of the stomach or duodenum should be ascertained and cleared up. If gall-stones are the exciting agent they should be removed for chronic pancreatitis, the result of biliary calculi, is usually cured by the removal of the stones and drainage of the biliary tract. In chronic infections of the gall-bladder with secondary involvement of the pancreas, in the absence of interference with biliary drainage, proper surgical technique furnishes a satisfactory symptomatic cure.

Medical treatment calls for careful case management. Rest in bed, elimination, mild counter irritation to the upper abdomen and an individualized diet, form the chief therapeutics. Fasting the patient for twenty-four hours or longer, permitting fluids to be taken in small quantities can do no harm and really affords rest to the pancreas. When the stools contain an excess of fat the feeding of the raw gland or pancreatic extract may be instituted. However, Allen of Boston says that, this therapy does not decrease glycosuria. In cases in which jaundice is present, the use of desiccated bile or of bile salts, has been advised, for it is said that the fat splitting action of the pancreatic juice is aided by the presence of bile.

F. L. & T. Bldg.

THE EARLY DIAGNOSIS OF CANCER OF THE UTERUS*

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In most surgical lesions, the diagnosis, through chemical, mechanical and laboratory technique, has become so accurate that the surgeon is enabled to attack and carry forth his work with precision and with end results that are most gratify-

ing. Yet with cancer of the uterus, we are aiding the surgeon little more than were our predecessors of several decades ago.

There is at present but one rational treatment for cancer of the uterus. That is surgical. Statistics show, however, that this treatment gives an exceedingly high mortality rate. With surgery on its present high plane, as we glance over the statistics of surgeons of superior ability, we must admit that the fault is not in the technique, skill or judgment of the operator, for these same men in their work on superficial cancers, such as those of lip, face, breast, etc., show a comparatively low percentage of recurrence. We must seek elsewhere then for the cause, and when we realize the difference in the degree of advancement of these superficial cancers and the deeper seated cases at the time of discovery, we must lay the blame, not to the surgeon, but to the general practitioner or family physician to whom most cases of uterine cancer come first for counsel and advice.

If then the surgeon is to successfully cope with this disease, it must be diagnosed and brought to him in its incipient stage, and the family physician must be the connecting link between patient and surgeon. His part in making an early diagnosis is not less, but equally or more responsible than that of the surgeon. He must come to realize that any irregularity during the cancer age in women may mean cancer, and he should not content himself until a thorough investigation has settled the case one way or the other—either that it is or is not cancer. When this is done and the positive case is in the hands of the surgeon, his responsibility ends, and not until then.

It is true that some women do not consult a physician until too late, but the vast majority soon become anxious over functional abnormalities of the pelvic organs, and either on their own initiative or at the solicitations of other members of the family, seek advice from their physician. His duty is now clear, and it is not merely taking a history of her ailment and prescribing a douche or what not, and advising her that the ailment is peculiar to her age and sex; but in making a thorough and complete examination with all the means at his command, or until he has satisfied himself practically beyond a reasonable doubt as to her ailment.

Some physicians will maintain that it is impossible to secure an examination in many cases. This, I maintain, is so rarely true that it scarcely deserves mention. In the time that I have been in practice, I do not recall an instance where I have desired an examination, that I have failed

*Read before the Sixty-fourth Annual Session of the Iowa State Medical Society, Waterloo, May 12, 13, 14, 1915.

to secure it. If called to attend a case of acute abdominal pain, we would not think of making a diagnosis and instituting treatment without, together with the history, baring the abdomen for scrutiny, percussion and palpation of same. Then why in another class of cases where the eventual mortality may be even greater, should we neglect the important points in arriving at a conclusion and giving this woman the same advantages as the one with the abdominal disorder? A clear and earnest exposition of the possible dangers of delay and the importance of knowing, before it is too late to offer assistance, whether any malignancy exists, will usually overcome any modesty and secure the necessary examination.

This much having been accomplished, I quote largely from Ashton the following points on diagnosis:

(1) History of the case which may lead us to suspect malignancy. Under this heading, we should know the age of the patient—most frequent between 30 and 50—whether or not the woman has borne children or had a cervical dilatation, as traumatism is frequently a predisposing factor. It occurs more often in the lower than in the higher classes.

(2) The early symptoms are the appearance of a leucorrhœa or irritating watery discharge, increase in menstrual-flow or slight bloody discharges at irregular intervals. "Nature sounds the warning in the leucorrhœal discharge streaked with blood, or in the few drops which appear after sexual intercourse, or in straining at stool, and if she is not heeded, the patient is doomed.

(3) The physical signs are obtained by (a) touch or palpating the cervix and vagina for nodules, thickening or hardening, together with the vagina-abdominal and recto-abdominal palpation to determine the condition of the body of the uterus and parametrium. (b) Inspection through a speculum is indicated in the early stages to observe the changes in color of the mucus-membrane; the appearance of small erosions; the characteristics of delicate papillary growths, and the condition of the external os.

Cervical cancer may be classified as squamous cell carcinoma; starting from the squamous epithelium covering the mucous membrane of the vaginal portion of the cervix—and adenocarcinoma; starting in the cervical canal and developing either from the cylindrical epithelium covering the mucosa of the canal or from the glands of the cervix. In both, the early signs are the same. The cervix is slightly enlarged, tissues harder than normal and somewhat nodular

in character. The mucous membrane is pale and its surface has a glazed appearance.

A positive diagnosis at this stage cannot be made without resort to the microscope, and this should be done in all suspicious or suspected cases. A small piece of the cervix can be removed and examined. If the findings are negative, it is well to keep the case under observation and repeat the examination at a later date.

The microscope is also the only sure method of differentiating cancer from the following conditions: simple erosions or ulcerations; specific ulcerations (chancre, chancroids, etc.); scar tissue, condylomata; sarcoma; polypi; and submucous fibroid. Cancer of the body of the uterus occurs with much less frequency than that of the cervix, and makes its appearance at a later period in life, but like cancer of the cervix, the diagnosis must be made early if permanent results are to be expected from radical treatment. There is but little in the history to aid us. The symptoms are hemorrhage, discharge and pain; hemorrhage or a watery discharge may first claim attention and the cause should be determined by the microscope.

The bimanual examination shows the uterus symmetrically enlarged in the early stages; later on the surface becomes irregular and nodular from the cancer deposits beneath the peritoneum. The body of the uterus is softer than normal and may be tender upon pressure.

The diagnosis should always be verified by the microscopical findings. Whenever irregular hemorrhages occur or menstrual flow is increased in quantity or duration, and the cause cannot be determined as outside the uterus, the cavity should be explored if possible with the finger, and unless certain that symptoms come from fibroid, polypus or a submucous fibroid, the endometrium should be secured through a thorough curettage and examined with a microscope. Uterine polypi; submucous fibroids; retained placenta; chronic endometritis, and sarcoma must be differentiated, and the findings from a curettment submitted to microscopical examination should determine this.

The dreadful nature of the disease demands that any and every method proposed for early diagnosis be thoroughly tested. The search for a serum seems a promising line to many investigators of the subject, and during the past few years a number of these methods have been advanced. None with the exception of the dialyzation reaction of Abderhalden have met with sufficient success to merit the attention of the medical profession. Proceeding on the "protective ferment" theory, from which he worked out his serum

diagnosis of pregnancy, Abderhalden tested the sera of carcinoma cases with carcinoma albumen with the result that he was able to present to the medical world, a biologic test, that is demanding the attention of the leading investigators of both America and Europe. While none of these have met with the same degree of success as that claimed by Abderhalden, the fault may lie in the technique which requires great care and attention to detail. This fact together with the difficulty of obtaining the proper albumen, make the test impractical for the general practitioner, yet with the advent of better equipped and more numerous laboratories, we may reasonably hope, in the near future, to have within each community, these advantages, and thus secure the benefit of this most recent aid in the early diagnosis of carcinoma of the uterus.

MALPRACTICE SUIT FOR DEATH FROM ANESTHESIA

A rather peculiar malpractice case was tried at Mankato recently in which Parke, Davis & Company was joined with two local doctors in a claim for damages for the death of Albert R. Moehlenbeck from ether anesthesia for a tonsillectomy. The father as administrator of his son's estate, brought suit against Parke, Davis & Company and two local doctors. The physicians in the case claimed that the ether was impure and was the cause of death. After a three weeks trial, the jury brought in a verdict against Parke, Davis & Company and the two local doctors collectively of \$5,000. It would therefore appear that the jury was unable to separate the liability of the several defendants. The defendants were insured in the Fidelity and Casualty Company of New York, which company conducted the defense. The Minnesota State Defense Association was not invited to participate. In commenting on this fact, the *Journal-Lancet* takes a rather pessimistic view of the usefulness of the State Defense feature of the State Society and its failure to secure the confidence, and co-operation of the profession. This can be easily understood. The fact is that most State Defense Associations are not conducted on business principles. It is as impossible to defend doctors in malpractice cases as it would be to defend corporations in claim cases without a full regard to the principles acquired by long experience. There can be no doubt that the same organization, the same preliminary preparation and the same method of defense must be involved in the defense of malpractice claims as in personal injury claims on

railroads. When state societies come to understand this, they will entirely reorganize their plans and thereby establish confidence among their members. A provision of from two to three dollars per member will be necessary as against fifteen or twenty dollars per member in commercial insurance.

WAGE EARNERS' INSURANCE

We have frequently expressed the belief that the practice of medicine was in an increasing degree becoming a public service. In the rapid evolution of economic conditions the medical profession finds itself a most important factor in the social change incident to changing conditions. Sickness and injury are a serious loss to economic efficiency, and whatever saving can be brought about by earlier and better methods, will be a distinct gain to the community. An editorial from the *Journal of the American Medical Association* is worth considering:

"The appointment by the governor of California of a commission to study social insurance, and the appropriation of \$20,000 for the purpose, is an evidence of the growing interest in this subject. The commission, consisting of five members, is not only directed to study social insurance systems at home and abroad, but is also empowered to recommend schemes for adoption by the state. California has just included occupational diseases within the scope of its workmen's compensation act, and the next logical step is the introduction of an insurance scheme to care for all sickness among wage earners. The more efficient medical care which a system of health insurance would provide for the workers of California is as greatly needed as it was in Great Britain. With the initiation of medical benefit under the British compulsory insurance system, many persons for the first time were able to afford the luxury of medical attention, and for the first time physicians were able to treat disease in its incipient stages among the industrial population. English physicians are expressing their surprise at the mass of suffering which previously was uncared for. The failure of many persons in this country at present to receive medical care constitutes the best argument for a change to the more effectual provision for medical attention offered by health insurance. At this time, when attention is being focused on these forms of insurance new to this country, the American Association for Labor Legislation, after three years of careful study, has prepared the draft of a health insurance bill which, it is announced, will be introduced into several legislatures next winter. This activity justifies the prophecy, previously made by the *Journal*, that the enactment of workmen's compensation laws would lead to new measures for both health and accident insurance."

The Journal of the Iowa State Medical Society

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THE DAVENPORT MEETING OF THE IOWA
STATE MEDICAL SOCIETY

The sixty-fifth annual session just closed, was fairly representative of past meetings of the Society. The registration was something over 500. The attendance at the sessions was generally good, and the discussions prompt under the skillful direction of President Small. The Wednesday evening meeting was particularly interesting and profitable. Dr. Small read his Presidential Address which was listened to with marked attention. Dr. Small was fortunate in choosing a subject quite novel and especially instructive as illustrating what a well organized county can do in the betterment of its members and in helpful public service. It is to be sincerely hoped that the work so successfully accomplished by Blackhawk County Medical Society may be taken up by other societies.

The Address on Medicine delivered by Dr. Alexander Lambert of New York, "Cardiac Pain," was a masterly production, full of thought and suggestion, presented in a manner clear and pleasing, leaving every medical practitioner with a feeling that his knowledge of heart disease had been materially increased.

On Friday morning, Dr. J. Rilus Eastman presented the Address on Surgery in his usual graceful and eloquent manner. The subject, "Alimentary Drainage in Man," which has been presented in different ways by numerous writers, received at Dr. Eastman's hands, an elucidation which whether entirely correct or not convinced all that he was absolutely right, so much for a brilliant and cultivated mind.

The House of Delegates transacted the usual routine business without ill-feeling or prejudice. The resignation of Dr. J. W. Osborn as Secretary, was accepted with much regret. His services during his term of office had been of great value to the Society. The press of private business had compelled Dr. Osborn to seek relief from the exacting duties of his office. We have, however, the assurance of his continued activity in the work of the Society.

The report of the Committee on Workmen's Compensation created much discussion, and on account of the newness of the measure to the majority of the delegates, the report was tabled without prejudice and the committee continued. We believe the action was unfortunate in that it delays a friendly relation with insurance companies which at present command the situation. The compensation act as it stands is the product of an unskilled legislature who after trying many expensive experiments and ignoring past experiences of other states and countries, will at last reach a reasonable solution of the problem. The duties of the committee, while not definitely defined, may be assumed to include a watchfulness and helpfulness of legislative action in a matter that cannot be successfully administered without a co-operation of the medical profession.

The action of the House of Delegates in electing Dr. J. N. Warren of Sioux City as President, will, without doubt, meet the approval of the profession of the state. At the same time it was brought to the attention of the Society that we have a wealth of material to select from in the future, and the gentlemen who were in the field could see not far off their elevation to the high office of President of the Iowa State Medical Society. The Committee of Arrangements were fortunate in planning their work so as to bring the headquarters hotel, meeting place and exhibitor's hall in such relation to each other as to cause the least waste of time and confusion.

The entertainments for both members and guests were of the highest order. The beautiful Blackhawk Hotel was unsparing in its efforts to entertain the guests, and those who sought entertainment at other hotels, had no cause to complain. The Velie Motor Vehicle Company of Moline, Ill., contributed generously in furnishing cars to members of the Society and guests, and thereby contributed much to the pleasure and comfort of those who desired to see the interesting and beautiful city of Davenport. The boat excursion on Thursday evening was a source of enjoyment, particularly to those who rarely have the opportunity to see the magnificent river in all its glory. The refreshments and

other incidents were of a character to leave a lasting impression.

The committee may well congratulate themselves on the success of their work, and are entitled to the thanks of the members and their families who were fortunate enough to find time to get away from the exactions of a busy practice.

MEDICAL LIBRARY

At the last session of the Iowa Legislature, a bill was introduced which had for its purpose the establishing of a medical library in connection with the state library at Des Moines, or making a medical library which should constitute a part of the general library. It was felt that a public medical library, while perhaps not as important as the law library, was important enough to demand legislative recognition. So far as we know, there is not a single public medical library in Iowa. There are, it is true, a considerable number of medical books in the State University Library, but this library is more for student purposes than as a reference library for the medical profession as a whole.

The idea of a public medical library in Des Moines was not so much for the collection of a large number of books as it was for the employment of a trained librarian who could be helpful to the profession in furnishing advice and information as to medical literature. To collect a great number of books without a trained librarian would be altogether unwise. To collect a small number, or comparatively small number of reference books, with a highly trained librarian, who could advise men who were looking up special subjects in medicine or surgery, as to what had been written and where references could be found, would be the desirable thing. Arrangements could be easily made through the state library for the securing of a loan of rare books for special purposes, which would be vastly more helpful than a large library in which the student might wander without any knowledge of just what he wanted to find. A skilled librarian could, from a system of card indexes, be extremely helpful in furnishing an author with data which would be useful to him in preparing communications to be presented to a body of scientific medical men.

When a physician prepares a paper from individual experience, it may be helpful insofar as his contribution is concerned, but it loses much of its value in that the author may not have known what observations had been made in the same direction by others, and therefore the value

of the contribution would be entirely dependent upon the accuracy of the writer describing his own individual experience and observations. Probably the greatest number of writers of medical papers would do well to limit their discussions to observations made by themselves without going into the work and observations of others. A few real scholars in medicine are in a position to make observations upon their own experience as relates to observations made by others. It is no doubt often humiliating for a writer of a paper to present something as original, coming from his own experience, that had been observed time and time again by others. We are sometimes entertained by a discussion of original and anomalous cases, when as a matter of fact they are not at all uncommon or rare or original or anomalous, and it is for this reason that there should be accessible to Iowa physicians, a library presided over by a skilled librarian, supplied with as many books as funds would permit.

In other states there are very good libraries owned by medical societies, housed in buildings or suites of rooms used for society purposes. Unfortunately for us in this respect, Iowa has no large cities and no large and wealthy medical societies. It was at one time thought that Polk County Medical Society could secure permanent quarters, and found a library which might be of considerable local value, and perhaps helpful to the profession generally over the state, but it seemed wiser to make the library a state library under the control of a librarian with a well defined plan of exchange and borrowing which would bring within the reach of medical men, authorities they might desire to consult, and which were not within easy reach.

We trust the profession of Iowa will think this over and make some special effort at the next session of our Legislature to get a well considered bill passed. We think that Johnson Brigham, our present state librarian, is quite right in holding that we had better defer definite legislative action until something definite and valuable can be secured.

POST GRADUATE WORK IN MEDICINE

The spirit of pessimism which seems at times to pervade the medical profession, is most unfortunate in that it creates a feeling of doubt even among those most friendly to the profession, of the sincerity of our contentions. This apparently grows out of two facts, one is—and the most unfortunate of all—that we cannot see in our neighbors or even in our medical friends

and associates, evidence of a largeness of views and a disinterested welfare vision of duty to the public and to institutions having a medical bearing. Too often it is heard that if the other doctors would surrender some of their selfish desire to gain patients or notoriety, a union of interests could be established and a friendly co-operative movement could be set on foot to bring about better hospital conditions, fuller medical society relationship and higher society standards; there would be more time and incentive for post-graduate work. Again it is said that the public support and encouragement of all kinds of medical fads and strange systems of practice, shows that the public is satisfied with anything that bears the title of doctor, and that these medical montebanks reap the rewards which should go to trained practitioners. When reminded that the great public knows that all the "wonderful discoveries" in medicine come from the investigations of medical science, and if the public was convinced that the "trained practitioner" was the true representative of medical science, he would secure a large share of what the public have to give, but the "trained practitioner" is not responsive, and constantly looks for easier and more direct ways.

The first begets the second. If the public select untrained men for medical advisers, it may be that the difference between the trained and the untrained is not great enough to be easily discovered. There are of course some people not to be measured by social position or by education, who suffer from a degree of mental strabismus, and who look with favor on pretenders. As a rule, however, the people are with the educated medical practitioners, and often wonder why the doctors do not make better use of their opportunities and join in a common purpose. It is a matter of common knowledge that in every community there are persons, some better endowed and better equipped than others, who are generally recognized as leaders in matters relating to the particular calling or profession, but by some fate this is not true in medicine; hence in any particular community no one apparently knows what the profession stands for, unless it is to make war in common on some sect in medicine. If a criticism is made on hospital management or on some political enemy or some public fraud, the answer is usually made that the "other doctors are satisfied," when as matter of fact, usually the other doctors are not satisfied.

Just at this moment, the leadership of the A. M. A. is in question, and we are rapidly reaching a crisis which is causing the greatest anxiety in thoughtful minds. Professor Usher

of St. Louis, has recently written a book entitled "The Challenge of the Future." In this book, the author has not dwelt on the dangers of military invasion as the first danger, but our unpreparedness for the great economic struggle which is sure to come, and the incidental dangers that lie-in-wait. We have developed individualistically without serious thought of the rest of the world, congratulating ourselves on our greatness; that we were the greatest, richest, and smartest nation; had the greatest merchants; the tallest buildings; the greatest lawyers and doctors; in fact we had the greatest of everything. If it had not been for this war, we should have gone on thinking so. We have all these things without doubt, but we have suddenly come to discover that much more is needed. We must study the economic side of professional life closer, and be better prepared to meet the problems that are sure to come up.

The doctor practicing in the smaller towns and in the country, has very little before him to cause anxiety; the problems are simple: the only one we can think of is "preparedness" in the way of post-graduate work from time to time as opportunity arises. It would be a serious mistake to assume that the village business man, or the farmer, is not discriminating as to the selection of his physician, even more so than the city dweller. The countryman frequently boasts that his physician is fully up to date; that he attends medical societies, spends several weeks every year or two, attending city clinics, and reads medical journals and late medical books. The country doctor who complains of being overlooked, is not usually one of this kind.

The city doctor who depends on his practice for his living, has some very serious problems before him, and always has had. The greater number of general practitioners have had a great part of their practice among people of small incomes, who could only pay a small fee. Now under the compensation acts, the rewards will be greater if properly managed. It is not sufficient to remain passive in the matter, but through the co-operation of his local society, see to it that he is not imposed upon, and that he secures a fair share of the rewards that the spirit of the law contemplates. It has been said with probably some truth, that the general practitioner does not read medical journals with the same care that agriculturists and stock breeders do. "The British Insurance Measure" speaks of medical men as "amiable weaklings" and goes on to say: "It is generally admitted that during the last quarter of a century, the position of the general practitioner has been steadily deteriorating." Is

this true? The Medical Economist says it is. The words above quoted may be found in a work on National Insurance by Carr, Garnett, and Taylor, published by Macmillan in 1912. This expression apparently of public opinion, received a severe shock when 27,000 English physicians refused to accept the Lloyd George schedule of fees in the Workmen's Insurance Act, until fairly satisfactory concessions were made, and put a new face on the expression "Amiable Weaklings." We sincerely hope such expressions will not be heard in Iowa, and as a means of prevention, let us read again the paper read by Dr. Harris at the Waterloo meeting of the State Medical Society, and furthermore if we find that officers chosen to protect the good name of our state, are negligent in their duty, let us at least make the effort to show that we are not "amiable weaklings." We must not exhaust our efforts in contending against the few weaklings who practice strange systems of medicine, but concentrate our energies on those who would bring about the deterioration of the profession for selfish or political reasons.

**FIRST ANNUAL CONFERENCE OF THE
CATHOLIC HOSPITAL ASSOCIATION,
MILWAUKEE, WISCONSIN, JUNE 24,
25, 26, 1915**

For some time there has been a sentiment growing in strength that hospitals under the control of Catholic Sisters should organize for the purpose of co-operation and for greater efficiency. It may be accepted that the general purposes of hospitals are the same, whether Catholic or under other auspices. It is furthermore believed that the time has passed when hospitals can afford to stand apart from the growing requirements of scientific medicine, but must become the centers of medical activities in every community large enough to maintain a hospital. Both the hospitals and the medical profession has been slow to recognize this fact, and both have contributed to keep the practice of medicine much behind the science of medicine. The Catholic Sisters in charge of hospitals, having come to realize the importance of a change in relation to mutual obligations and duties of physicians and hospitals to the public, organized a Catholic Hospital Association last year which promises much for the future.

The volume of Transactions of the first session is before us.

The second annual session will be held in Milwaukee, June 7, 8, 9, 1916.

THE LIVER AND SPLEEN

Since we have come to study pathology in the operating room, many confusing things have been brought to light. The most we can say for dead-house pathology is that it reveals generally the cause of death, but what has really led up to the fatal result is often uncertain when measured by autopsy findings alone. Experimental physiology has been very helpful so far as the lower animals are concerned, and by analogy helpful when applied to conditions formed in man. It is well known that certain organs are necessary to life, and recently it has been found that man can live and flourish without certain organs and the assumption has sometimes been reached that these organs were unnecessary and were indeed a source of danger.

These thoughts are suggested by a paper read before the Indiana State Medical Society by Dr. W. J. Mayo and published in the Indiana State Medical Journal of November, 1915. Dr. Mayo presents a series of 71 splenectomies performed at the Mayo Clinic to September 20, 1915. Of the 65 cases which recovered from the operation—so far as we can determine from the paper—all but five have remained quite well. These results with similar experiences at other clinics leads at first thought to the assumption that the spleen was not only an unnecessary organ but a harmful one. The same observations might be extended to the tonsils, appendix and to perhaps other organs, but living pathology is too young to admit of such a contention.

The close physiological relation between the liver and spleen so far as relates to blood supply, and the close physiological relation between the liver and spleen, particularly at the digestive period, enlargement of the spleen during digestion; the close relation between the venous circulation of the two organs shows a relationship in metabolism not at present known; the fact that the spleen is not essential to life while the liver is, the fact that in cirrhosis of the liver and other chronic diseases the spleen becomes (probably) secondarily involved; the fact that the removal of the spleen improves or cures the patient, presents the thought that the spleen bears a vicarious relation to the liver which renders the life of the individual more certain with a spleen than without it.

CLINICAL LABORATORY REPORTS

We hear the statement often made of the unreliability of the state laboratory reports, particularly in relation to one of the most important, viz., diphtheria throat cultures. There has been

an element of error amounting to about fifty per cent. which has been generally attributed to incompetency and carelessness on the part of the laboratory people. Dr. Hall of Kansas City, in an address before the Des Moines Pathological Society, showed that the fault lay generally with the physician who secured the specimen. After a long series of research examinations, Dr. Hall found that an element of fifty per cent. error came from the swab specimens which could be almost entirely eliminated if the specimens were secured in a competent manner. He showed that the swab method was unreliable and ought to be abandoned for a more reliable one; that a dull curette should be employed, gently scraping the diseased surface—being careful not to break through the epithelial surface of the tonsil into the sub-mucus tissue; to detach a piece of membrane and place it in a homeopathic vial to be sent to the laboratory. Dr. Hall furthermore showed that diphtheria throat specimens should not be subject to the hazard of distant transportation; but that in every town of any considerable size the culture should be made at home. It therefore follows that in every progressive community where life is worth living and where a group of doctors may be found, that provisions should be made for a competent laboratory worker.

It is not fair that the burden of this work should fall on the medical profession, but on the public who profit by it. It should be the duty of the county medical societies to bring these facts before the public, after a carefully arranged program has been worked out. The failure to accomplish anything of importance is largely due to the fact that no well digested plan of action is formulated. The city physician may have something to present to the Council, but no backing by his county society is arranged for and he is quietly and more or less politely turned aside. Co-operation, as Dr. Harris says, of all classes of doctors, big and little, should be enlisted in the cause of public welfare. Where this co-operation has been secured, results have followed.

THE POOR SMALL HOSPITAL

We are now seeing in Ohio among the small hospitals what we saw ten years ago in relation to medical colleges all over the United States. The small hospitals in Ohio petition against the ruling, that to grant diplomas to nurses, the hospital shall have a daily minimum attendance of fifteen patients. It is not claimed that the hospitals of a daily minimum of five or ten patients can give a good nurse training, but, pleads the poor small hospital, as did the poorly equipped proprietary medical school plead, poor but worthy medical student. The cry

fell on ears that grew more and more deaf to the pleading and was finally heard no more. In both instances the interest of the public was lost sight of,—securing a low grade professional education for commercial purposes;—if the graduate of the small hospital with scarcely any equipment would be content with smaller fees, there could be no objection. It is very clear that the valuation shall be placed on the state certificate and not on the hospital. The relief to the small hospital should come from public taxation or by public contribution rather than employ nurses-in-training for maids of all work under the pretence of giving a nurse training and then turn them loose on the public fortified with a state license.

IMPROVEMENT IN THE MILITARY SURGEON

With this April issue, the military surgeon appears in very greatly enlarged form and improved appearance.

It will hereafter be issued practically as a magazine de luxe, and no effort or expense will be spared to bring it to perfection.

With the expansion of the military and naval forces and the general interest in greater preparedness for defense, the military surgeon proposes hereafter to appear in a form more worthy of the importance of its special field of usefulness and of the dignity of the strong Association which it represents.

PHILADELPHIA ACADEMY OF SURGERY— THE SAMUEL D. GROSS PRIZE—FIFTY-TEEN HUNDRED DOLLARS

Essays will be received in competition for the prize until January 1, 1920.

The conditions annexed by the testator are that the prize "shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in Surgical Pathology Practice, founded upon original investigations, the candidates for the prize to be American citizens."

It is expressly stipulated that the competitor who receives the prize, shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery, and that on the title page, it shall be stated that to the essay was awarded the Samuel D. Gross prize of the Philadelphia Academy of Surgery.

The essays, which must be written by a single author in the English language, should be sent to the "Trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, care of the College of Physicians, 19 S. 22nd St., Philadelphia," on or before January 1, 1920.

Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bear-

ing the same motto, containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

WILLIAM J. TAYLOR, M.D.,

JOHN H. JOPSON, M.D.,

EDWARD B. HODGE, M.D.,

Philadelphia, March 1, 1916

Trustees.

REQUIREMENTS IN ATTENDING CHILD-BIRTHS—REGULAR PHYSICIANS AS WITNESSES AGAINST OTHERS—NON-EXPERT EVIDENCE AS TO TREATMENT

(Yard vs. Gibbons [Kans.], 149 Pac. R. 422)

The Supreme Court of Kansas affirms a judgment for \$2,418 damages in this action for malpractice in the treatment of the plaintiff in a case of childbirth. The court holds that the petition, in which the plaintiff alleged, in substance, that the defendant was employed as a physician to care for her in her confinement, and that he negligently produced a premature delivery, causing a laceration, and also failed to advise her of her condition and to carefully and skillfully treat her after the birth of her child, by all of which she was severely injured, stated a single cause of action. It was not necessary to treat the negligence of the defendant before and after the birth of the child as separate causes of action, any more than to have treated his neglect at each call or visit as separate causes of action. There was a single employment, and any failure to treat the plaintiff with due skill and care during that period, whether before or after the birth of the child, afforded but one cause of action. A physician employed in an obstetric case is required to care for and aid a patient, not only during her confinement and the delivery of the child, but it is his duty to make a careful examination of the patient and give reasonable and proper attention to any laceration or injuries resulting from the delivery, and if he fails in this respect or to inform the patient or those caring for her as to her condition, or to give them instructions so that they may act intelligently in the further care and treatment of the patient, he is guilty of negligence and liable for the resulting injuries.

Nor does the court think that because the defendant was an osteopath there was any error in physicians of the regular school having been permitted to testify as to the progress and condition of labor in an obstetric case, the methods of delivery, and the proper treatment of the mother after the birth of the child. It is true that, where a physician or surgeon is charged with malpractice, his treatment and advice are to be tested by the standards of the school to which he belongs. But where

there is practical uniformity in the rules of practice and treatment, regular practitioners of any school are competent witnesses as to the proper diagnosis and treatment of a given case; or where a person, who holds himself out as a medical expert or healer, has no fixed rules of practice, he is still bound to treat patients with ordinary and reasonable skill and care, and competent physicians, regularly engaged in practice, are competent witnesses as to whether the treatment administered in the case was properly or negligently performed.

Ordinarily only physicians and surgeons of skill and experience are competent to testify as to whether a patient has been treated or an operation performed with a reasonable degree of skill and care, but testimony as to many matters connected with the treatment of a patient, such as the statements of the physician or surgeon, as well as the external appearances and manifest conditions, which are observable by any one, may be given by non-expert witnesses. However, the mere fact that the witness, who was the plaintiff's mother, spoke to the defendant about attending her daughter, or performed some other friendly act in that regard, would not make her subsequent statements competent against the plaintiff, for whom the service was performed.

An instruction is approved which told the jury, among other things, that the defendant could not be heard to charge the plaintiff with contributory negligence in not having proper attention given to her injuries, if the jury believed from the evidence that, by the exercise of reasonable diligence he could and should have informed himself of the nature and extent of her injuries, and that he negligently left her in ignorance of their extent or seriousness, or he led her to believe a surgical operation unnecessary.—(The Journal of the American Medical Association.)

AIM AND DUTY OF SURGEONS—BAD RESULTS ALONE DO NOT PROVE MALPRACTICE

(Hills vs. Shaw [Ore.], 137 Pac. R. 229)

The Supreme Court of Oregon reverses a judgment for \$6,000 damages for alleged malpractice in the treatment of the plaintiff's broken leg, and remands the case with instructions to enter a judgment of non-suit. The court says that the testimony showed that the defendant was called to treat the patient June 4, properly diagnosed a fracture of the right femur, and to all appearances, treated it by the usual methods known and approved by reputable surgeons, until July 23, when on account of his intended removal to another locality, he left the case in the charge of another surgeon. It was not until after that, and after the plaintiff had begun to sit up and move around on crutches and had gone into town in an automobile that a misplacement or non-union was suspected.

It being alleged and admitted that the defendant was a practicing physician and surgeon, practicing

that profession at a certain place, which, in connection with the laws regulating the practice of medicine and surgery, necessarily implied that *prima facie*, at least, he had the requisite skill and ability. The substance of the doctrine taught by various instructive cases is that if a regularly licensed physician employs the skill of which he is possessed with reasonable diligence in treating a surgical case, he is not liable for an error of judgment, and that the mere fact that an untoward result ensues is not in any sense evidence of negligence. There are so many elements combating the surgeon in his efforts to restore a patient to bodily soundness that he can do no more than exercise his best skill and judgment to accomplish the desired result. The ideal which the surgeon strives to achieve in cases of this kind is so to establish coaptation of the broken parts of a bone, with the surfaces of the fresh fracture touching each other, that the bone is restored to its original situation, then by bandages or other appliances to keep it in position until healing ensues. This is the utmost that the highest degree of surgical skill can accomplish. Nature must do the rest.

Reduced to its lowest terms, this case was one in which the result of treatment was a failure. There was nothing to show that the surgeon did not do his best with what skill he possessed. The error of the plaintiff's contention consisted in relying on the abortive result of the treatment as an evidence of negligence on the part of the defendant, without showing further that some careless act or omission by the defendant produced that undesirable consequence. To hold the defendant liable under such circumstances would be to require him to insure absolute success in every operation which he undertook. Such a rule would be too drastic to be applied to the medical and surgical profession, and is not borne out by the authorities. However deplorable the condition of the plaintiff, there was a hiatus in the testimony on his behalf, between the time the defendant ceased to treat him and the subsequent discovery of the non-union of the bone, which broke the connection of the defendant with the untoward result so far as negligence was concerned.

BOOK REVIEWS

THE BASIS OF SYMPTOMS; THE PRINCIPLES OF CLINICAL PATHOLOGY

By Dr. Ludolph Krehl, Ordinary Professor and Director of the Medical Clinic of Heidelberg. Authorized Translation from the Seventh German Edition. By Arthur Frederick Beifeld, Ph.B., M.D., Professor in Medicine, Northwestern University Medical School, Chicago. Third American Edition. J. B. Lippincott Company, Philadelphia and London, 1916. Price, \$5.00.

This most valuable and scientific book on basic symptoms fills a place long needed by the advanced student in medicine. We recall in our student days

the long hours of study of Williams "Principles of Medicine" which laid a foundation for the best we could accomplish in our bedside work. Today with the vast change in methods of study, we have another inspiring work setting before us the "Principles of Medicine" founded on the accumulated scientific knowledge of laboratory research of many years. Before reading the text, one should study the author's Preface. We are reminded that the tendency to speculate is deeply rooted in the German mind and that one who sits at the bedside to unravel the complexities of disease should have a faculty of imagination which will enable him to escape in some measure the Gringrind dictum of "facts nothing but facts" of the barren "Hard Times" philosopher portrayed by Dickens.

The idea set forth in the introduction is carried through two chapters, including the circulation and blood as the basis of symptoms founded on the mechanics of the circulation and connecting link between every individual organ receiving material from and giving material to each. The author states that it is incorrect to designate any particular tissue as the blood forming organ, that every tissue in the body furnishes its contribution to the blood, that it gives to the blood as a blood-forming organ, some of its more striking elements, the blood corpuscle. "Obviously then, the composition of the blood will change whenever there are pathological changes in the activity of any organ that furnishes metabolic products to the circulation." The author further states: "Clinically, however, it is customary to speak of diseases of the blood only when the changes in the blood dominate the pathological picture, or when the cause of the blood change is unknown."

In chapter three, the author says: "We propose considering the various means by which the animal body resists the invasion of pathologic micro-organisms."

Chapter four considers the exchange of gases by internal respiration and by external respiration as forming the basis for the study of influences of pathological conditions.

Chapters five and six comprising 114 pages, are devoted to Digestion, Nutrition and Metabolism, including physiological conditions and pathological deviations as a symptom basis for the consideration of special metabolic disturbances; in chapters seven and eight, Carbohydrate Metabolisms, Diabetes and the Metabolisms of the Purin Bodies—Gout.

Chapter nine, Constitutional Diseases and Diathesis. Under this head are included Diseases of the Hypophysis, Pineal Gland, Thyroid and the Supra-renals.

Chapter ten includes fever from various causes. The principles involved here are very interesting. While no special form of fever is considered, the influences which affect changes in body temperature are most important. It is stated that the "substances which cause fever are possibly of proteid nature, and also that bacterial products are important causes of fever, but are not the only ones." "Fever may be

produced by the destruction of large number of cells in the body—even though micro-organisms play no part in the destruction process," a fact that often causes no little unnecessary anxiety in certain cases. The author is not prepared to admit that fever is ever caused by reflexes, but that the elevation of temperature in biliary colic, or (catheter fever) is either from absorption of toxic products or of actual infections.

The chapter on The Secretion of Urine, is especially valuable as an exposition of secretion as affected by different conditions of the blood circulation.

The concluding chapter is on the Nervous System, and like the other chapters is of practical helpfulness in the diagnosis of complex conditions.

AUTOPLASTIC BONE SURGERY

By Charles Davison, M.D., Professor of Surgery and Clinical Surgery, University of Illinois, College of Medicine; Fellow of the American College of Surgeons; Surgeon to Cook County and University Hospital, Chicago, and Franklin D. Smith, M.D., Clinical Pathologist to University Hospital, Chicago. Octavo, 369 Pages, With 174 Illustrations. Lea & Febiger. Cloth, \$3.50 Net.

The questions relating to direct fixation of bone in certain important cases has been considered in its many phases, according to the author, since 1662. The present generation of surgeons has seen many measures employed for this purpose; he has seen the passing of silver wire, is now seeing the passing of metallic plates, and is seeing the rapid development of bone grafts. Many exhaustive journal articles and not a few books have appeared on the subject; the last from the well known publishing house of Lea & Febiger, with the above title.

The first 100 pages present in the clearest possible manner, the theory of bone growth and the function in relation thereto of the bone graft, and endeavors to reconcile as far as may be, the conflicting experimental evidence. The author agrees in a general way with those who deny to the periosteum any material part in producing osteoblasts, and assigns this function largely to the periosteal layer of bone which forms an embryonic fibroblast which is transformed into the end product, the bone cell; much consideration is given to the relation of the embryonic element and the richness of the pabulum furnished it; the periosteum is important to the graft as a limiting membrane. Dr. Davidson, as a practical consideration, points out that the medullary graft should be free from periosteum while in an insert the periosteum should be preserved. The effort is to show as far as possible from experimental evidence, the manner of bone regeneration and how bone grafts behave in this process, thus determining the kind of graft best serving; and its relation to the bone the graft is intended to aid. The usual aseptic precautions as applied to bone surgery, are pointed out, and the best technic to accomplish the purpose.

The authors have been peculiarly fortunate in presenting the subject to reach the understanding of the reader fairly well informed on bone growth, and to bring him into relations with the best knowledge of operative methods of treatment when such becomes necessary. It is clearly apparent that no surgeon should undertake this work until he has an understanding of bone growth and development, and accurate technic gained by observation at the operating table of a master, supplemented by a careful study of the book under consideration, and the one recently written by Dr. Fred Albee.

PROGRESSIVE MEDICINE

A Quarterly Digest of Advances, Discoveries and Improvement in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., and Leighton E. Appleman. Volume 29, No. 1, March, 1916. Lea & Febiger Publishers, Philadelphia and New York. \$6.00 Per Annum.

This digest of recent literature is always welcome to our table for its helpfulness in securing the best information from many sources.

The surgery of the head and neck is written by Dr. Charles Frazer of Philadelphia. The digest of literature covering traumatic lesions of the brain is of particular interest to practitioners engaged in industrial surgery, a clear understanding of which, means much to all parties concerned.

The section dealing with surgery of the thorax is especially interesting to the general practitioner who needs to be accurately informed as to the latest and best methods of treating injuries of the chest.

The most exhaustive digest is on infectious diseases by Dr. John Ruhrah. The most interesting part of this section is the vaccine treatment of typhoid fever. Commencing with the vaccination prevention of Pfeiffer and Kolle in Germany, and Wright in England, and later the introduction into the United States and latest the mixed vaccines containing typhoid, paratyphoid A, and paratyphoid B, to reach a form of typhoid which typhoid vaccine alone did not appear to affect. The question does not seem to be settled even after a rather full discussion. Passing alone we come to the discussion of the use of autogenous living vaccine in the treatment of typhoid. Also intravenous injections of typhoid vaccine. Then the discussion of albumose in the treatment of typhoid and the injections of hordenin—an alkaloid from barley—all very interesting but unsettled.

Diseases of Children by Dr. Floyd Crandall.

Rhinology and Laryngology by Dr. George B. Wood, and Otology by Dr. Truman L. Saunders.

THE MEDICAL CLINICS OF CHICAGO, VOLUME I, NUMBER 5

Published Bi-Monthly by W. B. Saunders Company, Philadelphia and London. Price Per Year, \$8.00.

The first clinic of the excellent publications is on

Röntgenologic Aspects of Intestinal Stasis by James T. Case—a recognized master on everything relating to X-ray—illustrated by numerous cuts.

Dr. Charles S. Williamson at Cook county, gives a clinic on several subjects that are full of interest to the general practitioner.

Dr. Robert B. Prebles presents a case of Acute Nephritis following Acute Tonsillitis, always an interesting subject since we have come to recognize the wide range of infections from the tonsils.

At the Northwestern Medical School, Dr. Ralph C. Hamil presents a series of neurological cases.

At Cook County Hospital, Dr. Frederick Tice presents a number of cases, one of particular interest—Banti's Disease—which so often puzzles the doctor who does not often have the opportunity to study such cases.

Dr. Isaac A. Abt at Michael Reese Hospital, gives a rather extended account of congenital syphilis which should be carefully read for its helpfulness in clearing up difficult and doubtful cases.

A Case of Mitral Insufficiency and Stenosis with Embolism to the Brain at Mercy Hospital, Dr. Charles L. Mix. This case is of so much interest from a diagnostic point of view that it should be read with thoughtful care.

INTERNATIONAL CLINICS

A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Medicine, Surgery and Allied Departments. Edited by H. R. M. Landis, M.D., Philadelphia. Volume I, Twenty-Sixth Series, 1916. Price \$2.00 Per Volume. J. B. Lippincott Company, Philadelphia and London.

The first volume of this well known clinical series for 1916 contains three articles on Treatment; three on Medicine; one on Neurology; with a rather striking title "The Wounded Mind;" chiefly legendary and historical; one on Public Health; an article on Pathology, "Some Regenerative and Proliferative Phenomena and Their Possible Relation to Tumor-Formation" by Gordon J. Saxon, M.D., and Ellen P. Corson-White, M.D.; two papers on Gynecology and five on Surgery.

The volume closes with a General Review of Medicine for 1915 by Frank A. Craig, M.D. and John Speese, M.D.

VENEREAL DISEASES

A Manual for Students and Practitioners. By James R. Hayden, M.D., F.A.C.S., Professor of Urology at the College of Physicians and Surgeons, Columbia University, New York; Visiting Genito-Urinary Surgeon to Bellevue Hospital; Consulting Genito-Urinary Surgeon to St. Joseph's Hospital, Yonkers, New York. 12 Mo., 365 Pages, With 133 Illustrations. Cloth \$2.50 Net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

This the fourth edition of a work dealing with venereal diseases, which has been revised and in considerable measure rewritten. The importance of efficient treatment of gonorrhea and syphilis is so great that the physician should be prepared with the knowledge necessary to employ the proper method of dealing with the cases, either by treating them himself or by referring them to some one equipped for this kind of work. Doctors themselves may in many cases hold themselves responsible for bad results of incompletely cured cases and for the neglect of providing themselves with rather inexpensive means of treatment. In both gonorrhea and syphilis, laboratory assistance is frequently necessary, but more than all is a comprehensive knowledge of the accumulated experience of experienced workers. Dr. Hayden's book is useful, not only as a guide for the study of venereal diseases, but is convenient for reference. It is sincerely to be hoped that if the physician is only considering useful injection solutions he will at once refer his patient to a qualified doctor.

A REPORT ON STATE PUBLIC HEALTH WORK, BASED ON A SURVEY OF STATE BOARDS OF HEALTH

By Charles V. Chapin, M.D., Commissioner of Health, Providence, Rhode Island. Made Under the Direction of the Council on Health and Public Instruction of the American Medical Association. Published by the American Medical Association, 535 Dearborn St., Chicago.

This book of 200 pages gives a survey of the public health work of the several states, including Organization, Powers and Administration of State Health Work.

The book contains a fund of information readily accessible to those interested in what scientific medicine is doing in the way of public service and welfare.

A HAND BOOK OF INFANT FEEDING

By Lawrence T. Royster, M.D., Published by C. V. Mosby Company, St. Louis, Mo.

The author states the purpose of the book as being—"to furnish the essentials and only the essentials, of infant feeding, in a compact and succinct form, which purpose he has certainly achieved. He states that the advances in dietetics in recent years has been due in no small measure to the necessary study of the infant dietary. As the ratio of deaths in bottle-fed babies is so much greater than that in breast-fed infants, it is obvious that the room for and need of scientific feeding of artificially fed children cannot be too strongly emphasized and studied. The author mentions as "resources" in modifying cows' milk, sugar-fats and proteids, with alkalies, acids, whey, precipitated casein, peptonization, condensed milks and proprietary foods, and sterilization and pasteurization as secondary aids. A chapter on growth and development shows these to

be dependent upon the quality and quantity of the food received by the infant, particularly quality. A chapter on stools in infancy is furnished by Dr. John L. Morse, the importance of examination and a thorough knowledge of the significance of the fecal changes being made evident.

Breast-feeding is next taken up, then the normal infant on the bottle, the premature infant and its care, and the digestive disturbances in breast and in artificially fed infants. Chapters follow on Marasmus, Infections, Diarrhea, Preparation of Formulæ, Caloric Needs of Infants. The appendix gives formulæ of human milk, percentages of fat and calories per ounce in different portions of quart bottle of milk with directions for preparing such aids as barley, water, whey, Eiweiss-milch, etc. The work as a whole is well prepared, easily read and cannot fail to be a valuable addition to the already great mass of literature on infant feeding.

A TEXT-BOOK UPON THE PATHOGENIC BACTERIA AND PROTOZOA FOR STUDENTS OF MEDICINE AND PHYSICIANS

By Joseph McFarlam, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College of Philadelphia. Eighth Edition; Thoroughly Revised; Octavo of 807 Pages With 323 Illustrations, a Number of Them in Colors. W. B. Saunders Company, 1915; Philadelphia and London. Cloth \$4.00 Net.

In going over this book and observing the wealth of material offered, we feel as the author did when he stated that in writing his Preface: "No part of the work was found to be so embarrassing or was subjected to greater procrastination," and so the reviewer feels in the face of so vast a subject and in the presence of so much technical material.

The book begins with a short history of the evolution of bacteriology, followed by classification of micro-organisms, then a chapter on infections, sources and avenues of entrance. A chapter on immunity and one on sterilization and disinfection. The greater part of the work is devoted to culture staining and determination of micro-organisms and their relation to disease. We observe one thing in relation to each form of disease referred to that is particularly helpful, and that is a brief historical notice of the discovery of the infecting agent.

The great number of diseases due to some form of germ infection, together with the wide range of determination of the particular organisms, renders it impossible to consider more than the general fact that the student and practitioner is furnished with a reliable guide for daily reference in his clinic room and laboratory.

BULLETIN OF THE SOCIETY OF MEDICAL HISTORY

Bulletin of the Society of Medical History of Chicago, Volume IV, Number I, Edited by Dr. Mortimer Frank.

The Society of Medical History of Chicago publishes at irregular intervals a bulletin of medical history of much interest and value.

The value of these publications is best indicated by presenting the table of contents of the number before us: Galen, Vesalius da Vinci, Anatomists, William H. Washburn; Leonicens and the School of Ferrara, Edward C. Streeter; Albrecht von Haller, A Physician Not Without Honor, Charles Bert Reed; In Defense of Vesalius, Feilding H. Garrison; Leonardo da Vinci and his Anatomical Studies, Arnold C. Kelbs.

CANDY MEDICATION

By Bernard Fantus, M.D., Professor of Pharmacology and Therapeutics, College of Medicine, University of Illinois, Chicago. Published by C. V. Mosby Company, St. Louis, Mo.

The author treats of the recently revived efforts to render medicines more palatable, and therefore more readily administered to children. He reviews former attempts in this direction, and shows where a course of instruction by a candy maker has rendered his own self-appointed task much casier. He gives three requirements of candy medication.

First—The candies or Fabella Dulces, must be attractive in form, color, and taste, with freedom from any suspicion of medicinal taste.

Second—Must disintegrate rapidly in the mouth, as sick infants will not chew up candy as will healthy ones.

Third—Must be capable of ready extemporaneous preparation by the pharmacist, in order that the medicament may readily fit the case, and also that the assortment of more or less perishable goods need not be too large.

Dr. Fantus states the uses of sweet tablets, describes their manufacture, and the necessary though simple machine, shows the construction of formulæ, speaks of choice of flavor, subduing of tastes, choice of color, etc., and gives the formulae of various tablets and of stock preparations needed in their making. In this little book, the only one on the subject in any language, Dr. Fantus has certainly laid down lines easily followed, in what must constitute a real advance in therapeutics.

DIAGNOSTIC METHODS

A Guide for History Taking, Making of Routine Physical Examinations and the Usual Laboratory Lists Necessary for Students in Clinical Pathology, Hospital Interns and Practicing Physicians. By Herbert Thomas Brooks, A.B., M.D., Professor of Pathology, University of Tennessee College of Medicine, Memphis, Tennessee. Third Edition Revised and Re-written. C. V. Mosby Company, Publishers, St. Louis, Mo. Price \$1.00.

This is a concise guide for the hospital intern and practicing physician in working out history taking

and recording. It is particularly valuable to the physician who manages his own office laboratory.

NEW AND NON-OFFICIAL REMEDIES, 1916

Published by the American Medical Association, Chicago, Illinois. Price \$1.00.

This book of over 400 pages, contains a description of the medicinal preparations which have been accepted by the Council of Pharmacy and Chemistry prior to January 1, 1916.

The Council has done a great work in investigating the advertised remedies and giving this information to the physician. The report lays bare the preposterous claims of the over zealous manufacturer and gives us the actual value of the drug in question. Printers ink has given many drugs a value which unbiased investigation negatives.

If you desire the truth concerning drugs, buy and use this book and support the Council and the A. M. A. in the great work it is doing.

THE BOOK OF THE FLY

By G. Hurlstone Hardy, Published by Rebman Company, New York.

This small and unpretentious volume, dealing with a subject very much in the public mind of recent years, is timely in its publication, authentic in its contents, and written in a popular style often lacking in books meant, as in this one, for popular reading.

The author shows the house fly as a product of human unsanitation, giving its points of identification, its differentiation from other flies in structure and habits, and considers its distribution, concentration and causes therefore, and speaks of the natural enemies of the fly.

He shows the role of the fly as a disseminator of disease and then goes on to show remedial measures, such as cremation of refuse and their control within the house. The service and utility of flies is briefly considered and in conclusion is presented an outline of a campaign of effective warfare. An appendix contains much of interest to those wishing a scientific analysis and description of the structure of the fly and tables of different families of flies.

SEXUAL IMPOTENCE

By Victor G. Vecki, M.D., Consulting Genito-Urinary Surgeon to the Mt. Zion Hospital, San Francisco. Fifth Edition Enlarged, 12 mo. of 405 Pages. W. B. Saunders Company, 1915. Philadelphia and London. Cloth \$2.25 Net.

This is a subject of every day importance but one which few have the patience to study and observe with sufficient care to be valuable. The fact that five editions have been issued since 1888 shows the demand for reliable information on a subject upon which the physician is often consulted.

A REPORT OF A SURVEY TO DETERMINE THE INCIDENCE OF TUBERCULOSIS

By J. C. Perry, M. D., Senior Surgeon, United States Public Health Service. Sup-

plement No. 26 Public Health Reports. Government Printing Office, Washington, D. C.

Wanted—More Chemists for American Industry

On account of the heavy demand for technically trained men in this field, the University has announced for next year a five-year course in chemical engineering and a four-year professional course in chemistry. In addition, the broader courses already established will be continued. Practically and graduate from the professional courses, according to Professor Rockwood, can get a position at not less than a thousand dollars a year, with abundant opportunity for advancement as he gets practical experience.

(University News Letter)

NEW AND NON-OFFICIAL REMEDIES

Since publication of New and Non-official Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies."

Mercurialized Serum, Mulford—A solution of mercuric chloride in normal horse serum diluted with physiologic sodium chloride solution. It is proposed for the treatment of syphilis, particularly the cerebrospinal type. It is supplied as:

Mercurialized Serum, Mulford, No. 1—One 30 cc. ampule containing the equivalent of 1.3 mg. (1/50 gr.) mercuric chloride with rubber tube and intraspinal needle.

Mercurialized Serum, Mulford, No. 2—One 30 cc. ampule containing the equivalent of 2.6 mg. (1/25 gr.) of mercuric chloride with rubber tube and intraspinal needle.

Mercurialized Serum, Mulford, No. 3—A package of ten 30 cc. ampules each containing the equivalent of 1.3 mg. (1/50 gr.) of mercuric chloride with rubber tube and intraspinal needle.

Mercurialized Serum, Mulford, No. 4—A package of ten 30 cc. ampules each representing 2.6 mg. (1/25 gr.) mercuric chloride with rubber tube and intraspinal needle.

Mercurialized Serum, Mulford, No. 5—8 cc. mercurialized serum, Mulford, containing the equivalent of 22 mg. (1/3 gr.) of mercuric chloride in a syringe graduated in fourths, with needle.

Mercurialized Serum, Mulford, No. 6—A package of ten syringes, each containing 8 cc. liquid which represents 22 mg. (1/3 gr.) of mercuric chloride. H. K. Mulford Company, Philadelphia, Pa. (Jour. A. M. A., Oct. 2, 1915, p. 1185).

Radio-Rem, Outfit No. 4—An apparatus designed for the production of radio-active drinking water by the action of radium sulphate contained in terracotta plates. It consists of two plates contained in 250 cc. bottles; when the bottles are filled with water the two plates impart about 1.8 microcurie (5000 Mache Units) to the water in twenty-four hours. For action, uses and dosage refer to the article on

radium in New and Non-official Remedies. Schiefelin and Co., New York (Jour. A. M. A., Oct. 9, 1915, p. 1281).

Histamine Hydrochloride—The hydrochloride of the base beta-iminazolyethylamine (histamine). It is a valuable reagent for the standardization of pituitary preparations.

Imido, Roche—A name applied to histamine hydrochlorid.

Ampules Imido, Roche—Each ampule contains 1.1 cc. of an aqueous 1 in 1000 solution of Imido, Roche (1 cc. contains 1 mg.). Hoffmann-LaRoche Chemical Works, New York City (Jour. A. M. A., Oct. 16, 1915, p. 1367).

Betanaphthyl Salicylate—The salicylic acid ester of betanaphthol. It passes the stomach unchanged, but is split into its constituents in the intestinal tract. It is believed to act as an intestinal antiseptic and to act in a similar way in the bladder. It is said to be useful in intestinal fermentation, catarrh of the bladder, rheumatism, etc. Mallinckrodt Chemical Works, St. Louis, Mo. (Jour. A. M. A., Oct. 30, 1915, p. 1553).

Betol—A name applied to Betanaphthyl salicylate (which see). Merck and Co., New York (Jour. A. M. A., Oct. 30, 1915, p. 1553).

PROPAGANDA FOR REFORM

Iodum-Miller—The A. M. A. Chemical Laboratory reports that Iodum-Miller was found to be essentially a solution of iodine and potassium iodide in glycerin containing 1.68 per cent. of free iodine. The Council on Pharmacy and Chemistry reports that Iodum-Miller was not eligible for New and Non-official Remedies because incorrect statements are made in regard to its composition; because unwarranted therapeutic claims are made for it; and because the application of a trade name to a simple solution of iodine is not to be countenanced (Jour. A. M. A., Oct. 2, 1915, p. 1202).

Iod-Izd-Oil (Miller's)—Analysis in the A. M. A. Chemical Laboratory indicated Iod-Izd-Oil (Miller's) to be a simple solution of iodine in liquid petrolatum containing, not 2 per cent. of iodine, as claimed, but only 0.42 per cent. The Council on Pharmacy and Chemistry found the preparation ineligible for New and Non-official Remedies because the composition is not correctly stated and because the application of a trade name to a simple preparation of this sort is irrational (Jour. A. M. A., Oct. 2, 1915, p. 1202).

Hexa-Co-Sal-In—Hexa-co-sal-in (Hexo-Co-Sal-In Company, Red Bank, N. J.) is advertised as "a condensation product of familiar composition" and that it is "colchi-magnesium salicylate with anhydrous hexamethylenamin." An examination made by the A. M. A. Chemical Laboratory showed that Hexa-co-sal-in is a simple mixture of hexamethylenamin, magnesium salicylate and some colchicum preparation. The Council on Pharmacy and Chemistry reports that the statement of the composition of this preparation is false; that unwarranted therapeutic

claims are made for it and that the mixture is unscientific (Jour. A. M. A., Oct. 2, 1915, p. 1203).

The Soy Bean—The soy bean is of medical interest: (1) because it contains the enzyme, urease, which converts urea into ammonia and carbon dioxide and hence is used to estimate urea in urine; and (2) because soy bean products have been recommended as foods for diabetics. Street and Bailey of the Connecticut Agricultural Experiment Station, report that although the soy bean contains about 25 per cent. total carbohydrates, only about 8 per cent. composed of sugar, starch and dextrin, may be considered objectionable in a strict diabetic diet. Thus the sugar-forming carbohydrates contained in soy beans fall well within the limit of 10 per cent. regarded as safe for diabetics (Jour. A. M. A., Oct. 16, 1915, p. 1372).

Somnoform—This was originally composed of ethyl chloride 60 per cent., methyl chloride 35 per cent. and ethyl bromide 5 per cent. Now it is said to contain but 1 per cent. ethyl bromide. Like ethyl chloride, Somnoform has been used as a substitute for nitrous oxide before ether anesthesia and for short operations, but has been mostly used by dentists for extractions. It is doubtful if the mixture has any advantage over ethyl chloride. The mortality is less than that of chloroform, but twice that of ether and four times that of nitrous oxide (Jour. A. M. A., Oct. 16, 1915, p. 1391).

Some "Patent Medicines" for External Application—The following statements of composition is indicated by the reports of various state boards of health, the government chemists and the A. M. A. Chemical Laboratory: Amarol, a "complexion beautifier," is composed of Epsom salt 95 per cent. and borax 5 per cent. Anti-Freckle Lotion (Gustin's) contains mercuric chloride 1.5 per cent., alcohol 2 per cent. and water 96.5 per cent. Calocide, for "foot trouble," is sodium chloride 22.44 per cent., borax about 37.58 per cent., alum about 39.35 per cent., tannin small amounts. Carol, which "cleans and clears the skin," is boric acid, stearic acid and perfume. Clearola, which will "whiten the skin," is sulphur. Cuticle Acid, to "remove dead skin," is alcohol 10 per cent. and oxalic acid 2 per cent. Derma-Royale for skin affections, is a dilute alcohol-glycerin solution with small amounts of camphor, myrrh, benzoin and possibly other aromatics in suspension. Eptol, a wrinkle remover, is essentially borax 37 per cent., soap and stearic acid 63 per cent. Fatoff was found to be essentially soft soap. Glorinol Balm, a vanishing toilet cream, is composed of stearic acid, soap and borax 23.7 per cent., water 76.3 per cent. Glorinol Glowene, said to be a substitute for soap, is soft soap. Zemo, for eczema, pimples, dandruff and similar affections, appeared to be a watery-alcoholic solution containing methyl salicylate, thymol, borax, tannic acid, glycerin, menthol and a phenol-like body (Jour. A. M. A., Oct. 16, 1915, p. 1365-7).

Lactopeptine and Elixir Lactopeptine—Lactopeptine is sold under the claim that it contains pepsin, diastase, pancreatin, lactic acid and hydrochloric

acid. In 1907 the Council on Pharmacy and Chemistry reported that Lactopeptine was practically inert—"essentially a weak saccharated pepsin," devoid of tryptic activity. An examination made by the Council in 1913 confirmed the previous findings. Nearly four months after publication of the last report, the manufacturers protested against the report claiming that Lactopeptine possessed pancreatic activity and contained "loosely combined" hydrochloric acid. The Council now reports that an examination of the market supply demonstrated that a few recently manufactured specimens showed slight (therapeutically negligible) tryptic activity, but that most showed none; the amount of hydrochloric acid was insignificant. Again declaring Lactopeptine and Elixir Lactopeptine ineligible for New and Non-official Remedies, the Council points out that, whatever the tryptic activity of the mixture, it is therapeutically useless. Mixtures of pepsin and pancreatin are irrational. The two substances are not indicated in the same conditions nor can they act together. Under physiologic conditions such mixtures are chemically impossible. In a liquid medium the two substances destroy each other (Jour. A. M. A., Oct. 23, 1915, p. 1477).

A Therapeutic Absurdity—Lactopeptine, whether in the form of an elixir, powder or tablets, is a therapeutic absurdity. Even if fresh specimens of the powder, possessing slight tryptic activity, have any advantage over old ones, there is no way of telling which the patient is likely to get, for the trade packages of Lactopeptine are undated. In liquid preparations like Elixir Lactopentine, pepsin and pancreatin destroy each other (Jour. A. M. A., Oct. 23, 1915, p. 1466).

The N. F. Imitation of Elixir Lactopeptine—Nearly forty years ago the essential worthlessness of Lactopeptine was brought to the attention of the pharmaceutical profession. In spite of this knowledge the pharmacists have included imitations of Lactopeptine and Elixir Lactopeptine in the National Formulary under the titles Compound Powder of Pepsin and Compound Digestive Elixir. The N. A. R. D. Journal, devoted to the business rather than the professional side of pharmacy, defends the Compound Digestive Elixir on the ground that "physicians keep right on prescribing it." The pharmaceutical profession should consider that pharmacists will in the end lose the confidence of the medical profession and the public by the tolerance of worthless pharmaceuticals (Jour. A. M. A., Oct. 23, 1915, p. 1467).

Cardui, the Story of a Nostrum—Harper's Weekly (October 23) traces the growth of the Wine of Cardui business. The author, stated to have been employed by the manufacturers, denies that the nostrum will perform the many wonders claimed for it by the manufacturers, and says that there is one miracle that Cardui can perform—it can make money (Jour. A. M. A., Oct. 23, 1915, p. 1466).

OFFICERS IOWA STATE MEDICAL SOCIETY

1916-1917

The officers of the Iowa State Medical Society for 1916-1917 are as follows:

(The transactions of the House of Delegates and the Minutes of the Sixty-fifth Annual Session will appear in the July issue.)

- President-Elect—John N. Warren.....Sioux City
- President—John F. Herrick.....Ottumwa
- First Vice-President—Chas. B. Taylor....What Cheer
- Second V-Pres.—Clyde A. Boice.....Washington
- Secretary—Tom B. Throckmorton.....Des Moines
- Treasurer—Thos. F. Duhigg.....Des Moines
- Editor—David S. Fairchild.....Clinton

- Councilors
- Term Expires
- 1st. District—John R. Walker, Ft. Madison.....1920
- 2nd. District—Henry Albert, Iowa City.....1917
- 3rd. District—W. A. Rohlf, Waverly.....1921
- 4th. District—P. E. Gardner, New Hampton....1919
- 5th. District—G. E. Crawford, Cedar Rapids....1918
- 6th. District—S. A. Spilman, Ottumwa.....1918
- 7th. District—C. G. Smith, Granger.....1919
- 8th. District—J. F. Aldrich, Shenandoah.....1919
- 9th. District—A. L. Brooks, Audubon.....1917
- 10th. District—W. W. Beam, Rolfe.....1921
- 11th. District—G. C. Moorehead, Ida Grove.....1920

- Trustees
- Term Expires
- J. W. Cokenower, Des Moines.....1919
- D. H. Bowen, Waukon.....1918
- T. E. Powers, Clarinda.....1917

- Delegates to A. M. A.
- J. C. Rockafellow, Des Moines.....1917
- L. W. Littig, Davenport.....1918
- M. N. Voldeng, Woodward.....1918

- Alternates
- F. M. Tombaugh, Burlington.....1917
- D. H. Bowen, Waukon.....1918
- J. Lynn Crawford, Cedar Rapids.....1918

STATE SOCIETY IOWA MEDICAL WOMEN

This society at its nineteenth annual meeting held at Davenport May 9, elected the following officers: (For a more extended notice see the July issue.)

- President, Lillie Kinnier, Dubuque.
- First Vice-President, Laura Branson, Iowa City.
- Second Vice-President, Nellie Noble, Des Moines.
- Secretary, Jeannette F. Throckmorton, Chariton.
- Treasurer, Ida G. Rhoades, Cedar Falls.

SOCIETY PROCEEDINGS

The Appanoose County Medical Society met at Centerville, May 31. The subject for discussion at this time was: Diagnostic Value of the X-ray with practical demonstrations by means of the fluroscope and skiagraph.

At the meeting of the Cerro Gordo County Medical Society held at the court house in Mason City, May 24, with thirty members present, Dr. C. W. Hubbard gave an interesting paper on Extra Uterine Pregnancy; Dr. C. L. Marston gave a report of his work in some of the eastern clinics; and Dr. A. L. Wheeler talked about Sanitation from a professional standpoint. Dr. Wheeler paid tribute to the medical profession for its influence in securing the enactment of the great majority of the laws relating to hygiene and sanitation. He regretted that owing to carelessness on the part of some of the profession the laws relating to public health and quarantine are often imperfectly enforced. In conclusion Dr. Wheeler said, "The matter of health and hygiene is largely in our hands and should be treated in a manner loyal to established rules and regulations that are intended for the greatest good to the greatest number."

The Cherokee County Medical Society met at the Cherokee State Hospital May 31st with fourteen members and two guests in attendance. The program was:

Paper—Tumors—Rose Russell.

Paper—Icterus—Differential Diagnosis—T. C. Knox.

Cases showing the following Tumors: Epithelioma, Condroma, Adenoma, Lipoma, Sarcoma, Angioma, Myoma, and Osteoma. Presented by Staff of State Hospital.

Report of Meeting of State Medical Society—L. A. Wescott, delegate.

The Clayton County Medical Society held its semi-annual meeting at McGregor, May 4. Dr. Bruce B. Everall, of Monona, read a paper on Bronchial Asthma.

At the meeting of the Fremont County Medical Society held May 4 at Sidney, the following officers were re-elected: President, T. C. Harris; vice-president, J. M. Lovelady; secretary-treasurer, A. E. Wanamaker.

Dr. T. C. Cole, of Thurman, read an interesting paper on Electro Therapy.

The Lee County Medical Society met at Keokuk, May 4. Papers were read by Drs. C. F. Wahrer, W. C. Kasten and Dr. F. C. Roberts of Ft. Madison; Drs. W. P. Sherlock, Wm. H. Hogle and Coral R. Armentrout, of Keokuk, also read papers. At this meeting the society passed a resolution instructing their delegate to the Iowa State Medical Society to support any movement made at the Davenport meeting to secure more favorable legislation for the physician under the workmen's compensation law. A banquet at Hotel Iowa closed the meeting.

The Monona County Medical Society met at Mapleton, April 28 with seventeen physicians pres-

ent. Dr. Palmer Findley, of Omaha, was the guest of the society. Papers were also read by Dr. C. C. Herren, of Soldier, and Dr. G. S. Waterhouse, of Mapleton.

At a meeting of the Osceola County Medical Association held in Sibley recently it was agreed at the suggestion of the president, Dr. J. M. Cadwallader, that on all reports of cases under care of the physicians, furnished the newspapers, the name of the physicians or hospital be withheld from the publication. Drs. Ely and Lass of Ocheyedan, Dr. Cady of Harris, and Dr. Cadwallader of Ashton, were the out of town members present.

Tuesday, April 25 at Ottumwa, with nearly the entire membership present, the Wapello County Medical Society held a dinner at the Ballingall Hotel, in recognition of their colleague, Dr. A. O. Williams, having completed forty years of continuous active practice in Ottumwa. After the dinner had been disposed of, the post prandial program was carried out. Judge W. D. Tisdale, an Iowa City classmate to Dr. Williams presided, and the exercises took the form of a trial by the bench of the guest of honor, on an arraignment of aiding a gang of leeches in preying on the community by having donated the use of his office for their nefarious meetings and at times supplying various articles of refreshment and entertainment. Those who spoke, even as accusers, felt there were mitigating circumstances and the remarks, historical, anecdotal and otherwise, extolling Dr. Williams' honesty, loyalty, devotion and progressiveness, could have but brought cheer to the good doctor, as he manifested in his own speech and actions. The judge had to find him guilty and sentenced him to keep bright a large silver loving cup, which was presented to Dr. Williams at the close of the session.

May 2, 1916, was the last meeting of the season. The subjects of Pruritis and Vaginismus were discussed by Dr. S. A. Spilman. The former he said is usually produced by some irritating discharge not infrequently resulting from an old tubal infection and consequent endometritis and in such a case surgical interference is indicated. It is also a very common accompaniment of diabetes and careful urinalysis should always be made.

Vaginismus may be the result of imperforate hymen or of some ulcerative process about the fourchette. In some cases a highly sensitive nervous organization may be to blame. The treatment in the first instance is surgical, in the second it may be largely mental.

E. T. E.

The Washington County Medical Society on May 16 discussed Physicians Fees. As the result of this discussion the following rates will be charged in the future by the physicians of this county:

| | |
|---|---------|
| Calls within the city limits..... | \$ 1.50 |
| Night calls, from 9 p. m. to 7 a. m..... | 2.00 |
| Calls outside city limits..... | 1.50 |
| (Plus 50 cents per mile one way) | |
| Night calls outside city limits..... | 2.00 |
| (Plus 50 cents per mile one way) | |
| Minimum office call..... | .75 |
| Obstetrics | 10.00 |
| (Plus \$1.00 per hour after 6 hours detention. | |
| Country cases, 50 cents per mile extra. | |
| Forceps, anesthetics or versions, each \$5.00 | |
| extra. Secondary visits at regular call | |
| rates.) | |
| Minimum consultation fee..... | 5.00 |
| Lancing of boils, abscesses, etc., minimum..... | 1.50 |
| Minor operations, milcage as above..... | 10.00 |
| (Anesthesia and dressings extra) | |
| Anesthesia for major surgery..... | 10.00 |

The following contagious diseases: Diphtheria, Scarlet Fever, Cerebro Spinal, Meningitis and Small-pox to be double the price of the above ordinary calls and mileage rates, as above.

The Webster County Medical Society on May 2nd held a clinic at Fort Dodge at which, besides the surgical operations, several medical cases were shown, X-ray machines demonstrated, and demonstrations of the Fort Dodge laboratory work were given. Many out-of-county physicians attended the clinic and the banquet in the evening at the Waukonsa. Following the banquet Dr. O. J. Fay gave a talk on Industrial Injuries.

The Newton doctors club met at the Commercial Club room, Newton, May 17. In discussing Scopolamin Dr. Besser reported three cases in which this drug was used to produce "twilight sleep," eight or ten years ago and Dr. Hammer reported that he with Drs. C. E. Boyd and O. Carpenter had used this drug in a surgical case eight or nine years ago.

The following officers were elected: President, M. R. Hammer; vice-president, E. F. Besser; secretary, W. C. Gordon.

THE DES MOINES VALLEY MEDICAL ASSOCIATION

This association held its forty-fifth annual session at Ottumwa, June 1, under the presidency of Dr. M. Childress, Oskaloosa. The meetings of the association are always of a high order of excellence and this was one of the most successful ever held. The program was:

- Neuritis—E. T. Edgerly, Ottumwa.
- Appendicitis in Children with a Report of Cases—R. A. McGuire, Brighton.
- Some Interesting Cases—H. E. Pfeiffer, Cedar Rapids.
- The Surgical Managements of Pernicious Anemia with report of cases—Nelson M. Percy, Chicago.
- Conductive Anesthesia for Operations on the Head—C. M. Work, Ottumwa.

- The Pharmacology of the Circulation—C. S. Chase and B. H. Schlomovitz, Iowa City.
- Team Work in Medicine—Jay G. Roberts, Oskaloosa.
- Iodids—Con. R. S. Harken, Osceola.
- The officers of the association for the ensuing year are: C. B. Taylor, of What Cheer, president; C. H. Magee, of Burlington, first vice-president; B. O. Jewell, of Oskaloosa, second vice-president; E. B. Howell, secretary-treasurer, Ottumwa.

MARRIAGES

- Dr. Howard E. Campbell, of Anita, to Miss Laura Smith, of Ames, at Ames, May 10.
- Dr. Albert E. Shaw to Miss Loudean Boatwright, both of Des Moines, May 10.
- Dr. Raymond C. Coleman, of Estherville, to Miss Josephine Smith, of Minneapolis, at Minneapolis, May 24.
- Dr. Wm. Carl Goenne, of Eldridge, to Miss Norma Otto, of Davenport, at Davenport, May 24.

BIRTHS

- Dr. and Mrs. Otto A. Hansen, of Forest City, April 30, a son.

DEATHS

- Oliver Smith Reiley, M. D., College of Physicians and Surgeons, Keokuk, 1880; a practicing physician at Red Oak since 1880; died at his home in that place, April 30, from uremia, aged seventy-five. Dr. Reiley is survived by his wife and one son, Dr. W. S. Reiley, of Red Oak.
- Joseph R. Gorrell, M. D., University of Buffalo Department of Medicine, 1859; surgeon of the 129 Indiana during the Civil War; elected to the Iowa State Senate in 1893 and 1897; died at the home of his daughter, Mrs. J. W. Hunter, Newton, from senility, May 25, aged eighty-one.

CHANGES OF LOCATION

- Dr. C. W. Ellyson, of Alta, has sold his practice to Dr. D. A. Herron, of Comfrey, Minnesota. After post-graduate work in the east, Dr. Ellyson will be associated with Dr. J. A. Jerger, of Waterloo.
- Dr. H. M. Austin, of South English, has purchased the practice of Dr. Roy Downing, of Wellman, and will locate at that place.
- Dr. Jay D. Dunshee, formerly of Keystone, has located at Harlan.
- Dr. W. A. Rush, of Malvern, will remove to Logan, Utah.
- Dr. J. A. Shoemaker, of Ellsworth, has sold his practice to Dr. Horace P. Mahan, of Parsons, Kansas.
- Dr. T. V. Golden, of Creston, will locate in Wallingford.
- Dr. D. W. Farnsworth, formerly of Galva, has located in Cherokee.

MEDICAL NEWS

Dr. O. W. Boatman has been appointed city physician of Burlington succeeding Dr. E. J. Wehman who has filled this office for three terms. The salary was cut from \$1300 to \$600. From newspaper accounts it would appear that this reduction is due to two causes—first competition for the appointment; second decrease in revenue due to loss of saloon license. It would seem that the health department should be the last one in the city to suffer from the latter cause.

Dr. Mildred Esther Scheetz, an alumnus of the State University in both liberal arts and medicine, a resident physician in the hospital for the insane Washington, D. C. on June the first received the degree Ph. D. from George Washington University, the subject of her thesis being Functions of the Cerebral Motor Cortex.

Senator Joseph Allen, of Pocahontas, delivered the commencement address at the Des Moines Still College of Osteopathy May 26 when forty-two were graduated from this institution.

The annual meeting of Association of Medical Directors of Legal Reserve Life Insurance Companies of Iowa was held at Davenport, May 10, and the following officers were elected: President, Dr. G. E. Crawford of Cedar Rapids Life; vice-president, Dr. F. L. Wells, of Equitable Life; secretary, Dr. M. L. Turner, of Western Life.

The object of this organization of Medical Directors of Legal Reserve Life Insurance Companies is for the purpose of a closer relationship between the companies and the local examiners and to obtain the greatest efficiency among the examiners throughout the state.

THE VICTOR ANIMATOGRAPH

The lantern work at the Davenport meeting was the best ever seen at any medical meeting in the state. The service was complimentary by the Victor Animatograph Company of Davenport. The lantern used was one of their own make, a low priced machine, which can be attached to an ordinary electric light.

THE JOURNAL OF THE NEBRASKA STATE MEDICAL ASSOCIATION

At the recent meeting of the Nebraska State Medical Association the association decided to publish its own journal henceforth. The editor will be Dr. Irving Cutter, Dean of the Nebraska School of Medicine, the business manager will be the Secretary, Dr. J. M. Aiken, Omaha, and the first issue will appear in July.

The Journal of the Iowa State Medical Society extends congratulations to this new entrant to the field of journalism and predicts for it a long, useful and successful career.

REPORT OF COMMITTEE ON ARRANGEMENTS, DAVENPORT MEETING, 1916

| | | |
|--|----------|----------|
| Total receipts from exhibitors..... | \$405.00 | |
| Paid Opera House..... | | \$200.00 |
| Paid Moose Hall..... | | 50.00 |
| Paid printing, blue prints, postage, stenographer, telephone, telegraph, watchman, laborers, hotel bills for out-of-state guests, gavel, flowers sign painters, and incidentals..... | | 144.66 |
| Returned to the State Society..... | | 10 34 |
| | <hr/> | <hr/> |
| | \$405.00 | \$405.00 |

Respectfully submitted by
L. W. LITTIG, Chairman.

THE COMMERCIAL EXHIBIT 1916 SESSION

One of the pleasing educational features of the 1916 session was the commercial exhibit which without any doubt was the best ever shown at a meeting of the Iowa State Medical Society. The appended list of exhibitors shows the variety and high class of physicians requisites shown.

- W. D. Allison Company, Indianapolis, Ind.
- Horlick's Malted Milk Company, Racine, Wis.
- Sharp & Smith, 157 N. Michigan Blvd., Chicago, Ill.
- C. V. Mosby Company, Metropolitan Bldg., St. Louis, Mo.
- Standard Oil Company, 72 W. Adams St., Chicago.
- Dr. H. M. Alexander Company, Marietta, Pa.
- G. D. Searle Company, 215 W. Ohio St., Chicago.
- The Lungmotor Company, 180 N. Market St., Chicago.
- Borden's Condensed Milk Company, 108 Hudson St., New York City, N. Y.
- R. & E. Manufacturing Co., 1195 E. 124th St., Cleveland, Ohio.
- Reed & Carnrick, 42 Germania Avenue, Jersey City, N. J.
- Wm. Meyer Company, 825 Washington Blvd., Chicago.
- Hynson, Westcott, and Company, Charles and Franklin Sts., Baltimore, Md.
- National Pathological Laboratory, 5 S. Wabash Ave., Chicago.
- Macalaster-Wiggin Company, 154 W. Lake St., Chicago.
- G. W. Brady & Company, 754 S. Western Ave., Chicago.
- Styloform Shoppe, 209 Main Street, Davenport, Iowa.
- John McIntosh Company, 30 E. Randolph St., Chicago.
- Weder Manufacturing Company, Germantown and Stanton Avenues, Philadelphia, Pa.
- J. P. Blakiston, Son & Company, Philadelphia, Pa.
- Dr. John Traister, Oskaloosa, Iowa.
- Standard Chemical Company, Des Moines, Iowa.
- Merry Optical Company, Des Moines, Iowa.

The Journal of the Iowa State Medical Society

Vol. VI

DES MOINES, IOWA, JULY 15, 1916

No. 7

PRESIDENT'S ADDRESS—STATE SOCIETY, IOWA MEDICAL WOMEN*

LILY KINNIER, M.D., Dubuque

I believe it is customary in beginning a President's address to thank the Society for their confidence in electing you to the chair.

This I have not the pleasure of doing as I was not elected. I simply fell into it. I believe it is also customary to prefix some title to an opening address. This I cannot do as it would be impossible to find a title for the somewhat desultory remarks which I have to offer.

Dr. Clara B. Whitmore should be here in the President's chair. When she wrote me that she was to start for China within a few days, I immediately sent her a note by special delivery asking her to send us her President's address and suggesting that we would be most interested in hearing of the work being done by medical women in her new home.

I received no answer.

When our stationery reached me I was very sorry to see that her name had been omitted from the list of officers. It should be at the top.

She is our President and I regret very much that she is not here with her address which would be up to the standard of those previously given.

My first remark is a question. Why do we have a Women's State Medical Society?

This question I have been asked again and again.

From several letters I received when I was Secretary of this Society in answer to letters sent out inviting women to join us, I learned that it was supposed by some to be for the purpose of antagonizing and fighting our medical brethren.

When I could not convince them that such was not the case, that we had a higher motive—that we were organized for co-operation in matters of vital importance to the individual, to the home and to the community at large—I simply asked them to come to one of our meetings, to meet and become acquainted with the women of our state

and then to decide whether or not they felt inclined to come again.

I think I can safely say that those who tried it felt repaid, and felt that they had not only been encouraged to remain for the regular session of the State Medical but to become members of it if not already so, instead of having been induced to sign a pledge never to join it or something of the kind.

We do not wish to segregate ourselves from the main body of the profession. On the contrary, we wish to be absolutely loyal colleagues.

We all realize that it is impossible for a woman to practice medicine without becoming interested in the improvement of civic and social conditions in her own community.

Among the community problems are grouped the subjects of housing, health, industrial problems, child welfare and the courts.

Housing conditions for example affect the health and moral tone of the individual and family, and are important factors in the work for children in connection with the schools, settlements, juvenile courts, etc.

In regard to health—educational campaigns are most important if disease is to be decreased.

The individual must be taught to observe the rules of hygiene, and co-operation of individuals must be secured in order to enforce the laws.

And right here I would like to ask if it would not be well if women were allowed to have a vote on these laws?

Industrial problems concern the well being of almost every family. Wages, hours and conditions of work are all important factors in the community, and a knowledge of these is essential if one is to give intelligent advice to young people who are seeking employment.

Under child welfare work we have the subjects of child labor, schools, clubs, amusements, deficiencies, juvenile courts, delinquents, etc.

In considering child labor we certainly have an argument in favor of equal suffrage due to the fact that in seven out of twelve suffrage states there is already the eight hour day law for

*Address delivered before the Iowa State Medical Society, Iowa Medical Women, Davenport, May 9, 1916.

minors, while only fourteen of the thirty-six male suffrage states have this law.

In regard to the school work in our own state I would like to say a few words.

It seems to me that one class of children—the deficient class—should have more special attention given them than they are now receiving in our public schools. In many of the cases the deficiency is due to impaired hearing or impaired eye-sight, whereas mentally these children are just as capable of receiving instruction as are the efficient children of the class.

It is manifestly unfair to group them with the feeble minded (even though they are equally backward in school) for such a classification is apt to embitter and discourage them.

We all know that school instruction is attended with far inferior results in children whose hearing and seeing faculties are impaired than in normal ones unless due regard is paid to their difficulties.

For instance a child commanding a hearing distance of three feet four inches to one foot eight inches for whispered language, can still follow the lessons in public schools, but for children with hearing power below this, special classes should be provided.

Likewise, children with poor eye-sight should have special attention. These children should have instruction adaptable to them even though it lengthen the period of school life.

By such means they would be encouraged to do the amount of work consistent with their physical development instead of constantly feeling a sense of mortification because of their inability to keep up with a class of normal children.

Wisconsin today represents in its system of public day schools, the most progressive movement in the education of the deaf that has appeared in this country.

This state now has thirty-three schools scattered throughout the state in cities and villages, thus enabling many deaf children to obtain their education without being obliged to break home ties.

The matter of organization of such a school in this state is very simple.

When the board of education in a city or village finds that there are several deaf children in the community, such board has only to apply to the state superintendent for permission to organize a school for the benefit of these children. Upon receipt of such a request, the superintendent will issue a certificate of organization, and the school may be opened.

At the close of the school year the board reports to the state superintendent the names of the

pupils who have enrolled together with the number of days each pupil has attended.

The superintendent then allows one hundred and fifty dollars for each pupil who has attended 180 days, and for other pupils a proportionate part of this sum.

In these schools even those who are congenitally deaf are trained to use their organs of speech. They are constantly associated with hearing people and play with the hearing children on the play-ground. This constant companionship together with the instruction in speech and lip reading tends to make the deaf child as nearly like the hearing child as possible.

The nearness of the day schools for the deaf to the homes of the children enables the parents to be in daily or almost daily communication with their children—causes the parents to take a deep interest in the school which their child attends, and helps the public to understand the needs of the unfortunate at their own door.

Through the efforts of the "Wisconsin Aid Society for the Blind" in 1907 the legislature passed a bill for the establishment of day schools for the blind to be organized and maintained in the same manner in which the schools for the deaf are organized and maintained.

At the present time there are four of these schools in Milwaukee and three in other cities.

How many of you know children who are deaf or semi-deaf—blind or semi-blind—to whom schools of this kind would be perfect boons? Many of these young people would have made fine useful citizens instead of burdens if the schools had been brought to them.

Can we not lend our influence to the purpose of securing in our own state better educational advantages for the children with impaired hearing and impaired eye-sight?

Concerning juvenile courts, etc., we should know whether or not they are treating intelligently minor offenders in our community, in other words whether they are curing delinquency or whether they are perhaps increasing it by their treatment of these children.

We need one another's help along these lines, and it is only by co-operation that we can secure this.

Some one has said that if the world is to be reformed it is much more likely to be done by woman than by man because that as a sex he is in power and the people who are in power never want to alter anything.

In regard to the subject of equal opportunity for men and women, there seems to be a great difference of opinion (even in one family).

A while ago I heard my father say to the son

of one of our prominent physicians—"John, I am glad you are not going to study medicine. I wouldn't want a son of mine to—it's too hard work. I said, "Why father, what a thing to say, you certainly encouraged your daughter to study." He answered, "that is different, every one helps a woman."

Likewise I remember hearing one of my classmates say that their old family physician always maintained, that other things being equal, a man in any profession would treat a newcomer, if she were a woman, more kindly than if she were a man—that it was human nature.

Is this true?

I think not.

I believe that in almost any profession—a woman has to do a little more to make good than a man.

I read awhile ago that one of the most prominent medical women in Chicago said that as a result of fortunate personal experience she had for years believed that women were given the same chance as men, but that she had now become convinced that such was not the case and therefore now believed in woman's organizations.

Is it not a fact that the organization of a Woman's American Medical Association by some of the leading women physicians of our land is an evidence that many of our workers have the same feeling?

When we hear of women being left off the staff of the new hospital for women and children in New York City, we cannot but feel that we have not yet reached the age of equal recognition.

Sometimes—though we realize that each century is a little better for women than the previous one—we cannot help feeling, influenced by centuries of our maternal forbears who did not do things because they were not allowed to—that all avenues are open to men and very few to women.

Also, when we think of how dependent our maternal ancestors became because they were taught that they could not understand the affairs of the world until they believed it—it's a wonder that after centuries of such heritage we have the energy with which to even struggle.

However, we are doing exactly this, and it is something of a comfort to be able to struggle together. We all know that a bright young woman has far greater difficulty in securing an internship in a first class hospital than a man of equal or less than equal ability.

This should not be so. It is a great stumbling

block. We should have the chance to share in all the advantages which tend to make better practitioners. The fact that we have gained what we have is due not only to the courage, perseverance, and intellectual attainments of our leaders, but is also due to the conscientious work and skill of the rank and file.

Recently the trustees of Columbia University have voted to admit women to the college of physicians and surgeons; three years ago a similar action was taken by the School of Medicine of the University of Pennsylvania, and last year by the School of Medicine of Tulane University of Louisiana.

This is all a great gain, but much yet remains to be done before we can feel perfectly satisfied, for until all hospitals and medical schools throughout the country are open to women on the same basis as to men, we cannot feel that we have received just recognition.

For this we must all work and work together.

Dreaming of an ideal situation will accomplish nothing.

The war has greatly altered the position of medical women, especially in England. Never before have they been in such demand.

All the available men in the medical profession are now on duty abroad. Consequently the great English hospitals which have hitherto refused to admit women practitioners, now open their doors wide to them and frequently pay them twice as much as they formerly paid men for the same service. Some of the women have been in attendance on the wounded since August, 1914, and, like the men, have done their work fearlessly, not only in Paris and other comparatively safe places, but also in Antwerp where they were among the last to leave the shell stricken city. In fact they left Antwerp only as the Germans entered it, and only escaped being made prisoners of war through the kindness of a bus driver who permitted the women doctors to ride on top of the cases of ammunition with which his vehicle was laden.

And after the war how is it going to be?

Will this wave of employment which is now so high be followed by a tremendous fall?

Not for some time at least, as the drain on qualified practitioners and medical students will certainly cause a shortage during the next few years, and by that time women will, we hope, have demonstrated to the world as well as to King George's realm, that they are able to compete with the men.

ARTHROPLASTY FROM CLINICAL AND EXPERIMENTAL STANDPOINT*

ARTHUR STEINDLER, M.D., F.A.C.S., Iowa City

It is safe to state that the greatest furtherance was given to arthroplasty with the introduction of interposition methods. First inaugurated by Helferich in 1893, muscle flap methods were used by Rochet, Hoffa, Nelaton; skin flaps by Chlumsky; free fascia flaps by Kirschner and others. Murphy's pedunculated fascia flap was first introduced in 1905. Chromicised pig's bladder is advised by Baer and lately Allison advocates the use of silver impregnated fascia.

According to the very thorough investigations of Payr, the fascia interposition method is the operation of choice. The pad of connective tissue covering the bone end is an excellent substitute for the lost cartilage, being well able to pro-

rectly opposite to each other will give rise to fibrous adhesions, an occurrence which must be most anxiously avoided in forming a new joint. Free fascia flap may induce adhesions for this reason, except if it undergoes necrosis and absorption, in which case adhesions are prevented. This is most securely done by his method of silver impregnation of the fascia, as the fascia is completely absorbed and the silver absolutely non-irritant to the tissues. The more irritating influence of the chromicised pig's bladder of Baer tends much more to the formation of adhesions. The principle point, according to Allison, is to obtain the formation of a cavity, and he therefore lays stress upon the solubility of his material.

Dr. H. L. Beye of the surgical department of the State University of Iowa and myself have worked out a small series of experiments on dogs which have led to the following observations:



tect the joint constituents from pressure atrophy. Subsequently a rounding up and reshaping of the bones always takes place; moreover, the author also notices a structural adaptation of the texture of the bone, conforming with Wolff's law of functional adaptation of bone, and very clearly demonstrable in the X-ray pictures. The arrangement of the bone trabeculae finally approaches normal conditions, intra-articular joint bodies become rounded off, etc. Allison's findings are greatly at variance however, with those of Payr. In regards to the changes of repair after operative trauma to the joint surfaces, his investigations show that there is very little new bone formation from the denuded bone area at the end of sixty days. The new formed bone is always seen under that part of cartilage which has been left intact. Two denuded surfaces di-

No adhesions of any kind were formed after mere scraping of the cartilage covering, either with insertion of fascia flaps or in the controls.

Pedunculated muscle fascia flap was transformed into a connective tissue pannus adherent to the denuded areas of bone. Fig. Sl. 1 and 2. The histological examination shows complete transformation into connective tissue and no traces of original muscle fibers are found.

The denuded areas show lacunar reformation of cartilage in the muscle flap joints as well as in the controls, but no reformation of bone is noticed in the denuded areas.

In another instance we noticed that the pedunculated fascia flap had been transformed into a small pedicle containing a cartilagenous nucleus and adherent to the remainder of the capsule, Fig. 3.

Case Report—Flap Method

1. H. A., twenty-nine years, XII, 1, 14. Old

*Read before the Sixty-Fourth Annual Session Iowa State Medical Society, Waterloo, May 12, 13, 14, 1915.

Caries sicca Humeri with ankylosis. Resection of head of humerus and interposition of pedunculated muscle flap from the deltoid.

Longitudinal incision from acromion down. Splitting of the deltoid to which the capsule is adherent. The long tendon of the biceps is retracted outward. Resection of the adherent head of the humerus. A muscle flap is formed from the deeper layer of the anterior half of the deltoid muscle. This flap is fastened to the outer and posterior capsule with sutures of chromicised catgut, covering the resected end of the humerus. Cigarette drain, closure of the wound and fixation in abduction. Primary union. The shoulder shows good mobility as long as in observation, but the patient was lost sight of and no later report is at hand.

2. E. K., thirty years, XII, 1, 14. Fracture of right astragalus and collum astragali. Supination deformity. Flattened body of astragalus pressing against the fibula.

Resection of the lateral portion of the body of the astragalus which presses against the external malleolus. Interposition of pedunculated fascia flap taken from anterior surface, between body of astragalus and malleolus externus.

Technic—Whitman incision around malleolus externus. Dissecting and dividing of the peronei after securing both ends for reunion later in the operation. Resection of the lateral fragment of the body of the astragalus, projecting against the malleolus externus; then after dividing the calcaneo-fibular ligament the joint is opened and head and neck of the astragalus is resected as in Whitman's operation. This frees the motion in the subastragaloid joint. A pedunculated fascia flap is then prepared from the anterior surface with proximal pedicle and inserted between fibula and the lateral wall of the body of the astragalus. Wound closed. Foot fixed in cast in middle position. Primary union. The cast is retained for three months after which time the patient walks and bears weight without pain.

3. E. S., III. 23, 15, forty years. Fracture of internal and external malleolus and impingement of the body of the astragalus upon the fractured ends of tibia and fibula, owing to the narrowing of the mortice of the ankle. Indication for operation: pain. Interposition of fascia flap between fibula and astragalus.

Technic—Whitman incision around the outer malleolus; dividing of the peronei and anchoring of the ends for reunion later in the operation. Resection of a wedge shaped piece from the inner portion of the outer malleolus and interposition of pedunculated fascia flap taken from the dorsum pedis. Then from an inner incision the inner malleolus is chiseled free. Fixation in cast. Patient is still in fixation. There is no pain on weight bearing at the outer malleolus, but some at the inner where no fat fascia pad was used, so that this additional operation may become necessary in the future.

4. A. R., twenty years, I, 4, 15. Traumatic ankylosis of first intermetatarsal joint of third finger of left hand.

Operation—Radiodorsal incision over the joint and retraction of the extensor tendon and reduction of the subluxated middle phalanx. Resection and reshaping of the joint ends, leaving a central spur of the basal phalanx. Bandaged in flexion. Passive motion is started after forty-eight hours, and the joint kept fairly movable, but the end result is greatly impaired by neglect of the after treatment on the part of the patient and possibly by the fact that not enough of the bone had been resected.

5. Mrs. S., Dr. Chas. Ryan, IV, 15. Fracture of capitulum radii of right elbow, five weeks ago. Impingement behind and below epicondylus externus. Partial ankylosis of elbow in semi-flexion. Resection of capitulum radii and interposition of fascia flap.

Technic—External longitudinal incision from epicondylus externus down. Dissection and removal of fractured head of radius. Fascia flap with proximal pedicle from the forearm fascia, and interposition between humerus and shaft of radius, covering the latter and secured with chromic gut sutures. Primary union. After two weeks the range of motion is almost normal.

Osteoplastic Methods

6. Wm. S., forty-five years, I, 12, 15. Osteoarthritis of the right hip. Confirmed in X-ray and at operation. Indication: pain. Reshaping of the head of the femur. Approach to the joint following Murphy's Method. Goblet shape incision. Resecting of the greater trochanter and splitting of the gluteus medius muscle. Then the capsule is split from the neck upward to the limbus of the acetabulum where upon the osteoarthritic hyperostosis are apparent. Chiseling and reshaping of the head. Closure of the wound after replacing of the trochanter. Cast in abduction. Primary union. The cast is removed after six weeks and replaced by another; there is no pain at rest, and only little soreness upon putting weight on the hip. Still uses crutches. The stiffness of the joint continues, but the pain is greatly relieved.

7. R. H., twenty-five years. Osteoarthritis both hips. Left hip worse. Indication for operation, pain and increasing adduction and flexion deformity. Reshaping of head of the femur and intertrochanteric osteotomy.

Operation—Approach of hip joint and osteoplastic operation on hip after resection of the trochanter as in case six. After the capsule has been closed, an intertrochanteric osteotomy is added and the femur given abduction of thirty°. Wound is closed. Then an open tenotomy of the flexors of the hip, extensor fascia latæ is done from the anterior end of the arcuar incision around the trochanter. The limb is then fixed in hyperextension and abduction, and the position is secured by a double hip spica. Perfect primary union and very little pain owing to complete fixation of the leg. Still in cast.

8. F. C., eighteen years, XI, 10, 14. Bony ankylosis of right knee following septic arthritis. The knee is fixed in sharp angular deformity of eighty

degrees, resulting in a shortening of eighteen inches. The X-ray shows complete bony ankylosis.—Technic—V-shape resection with anterior base and interposition of fascia flaps from both sides. With due regard to the structural shortening of the nerves and vessels in the popliteal space, the knee is not fully extended, but fixed in extension of 150°. In this way a relative lengthening of the extremity by thirteen inches is obtained and the remainder of the shortening is equalized later by extension shoe.

I am in no position to decide between the two opposing view points: pedunculated non-absorbable flap or absorbable impregnated fascia with subsequent formation of a cavity. Neither the information gained from the literature nor my own limited experience, entitle me to express an opinion on a question which evidently must be settled by more exhaustive experimental work. In one case, free fascia, though apparently becoming absorbed, did not prevent nor retard the formation of true bony ankylosis in the corrected position given to the joint by osteoplastic operation. On the other hand, the pedunculated fascia, though completely adherent to denuded areas of bone, did not in our experiments interfere with the free motion of the joint. One point, however, seems to be clear, that is, that ample resection of bone should be done to secure free motion of the joint after flap interposition.

Discussion

Dr. J. W. Cokenower, Des Moines—The time has passed when ankylosis of joints, with but little, if any functional use, is permissible, because arthroplasty is being successfully employed to correct the condition. Along the line of thought presented by this excellent paper, we may recognize this idea: That there is no need of having ankylosed joints even when the epiphyseal portion of the end of the bone has sloughed away or when there is a section of bone one inch or even six inches that has been destroyed,—if properly done, because fascia and even muscle can be placed between the ends of the bone, and if protected, union takes place. And if you have not sufficient amount of fascia and muscle, you can use Kangaroo tendon, and by this means secure good union of the soft tissues upon the osseous tissue, and thereby have a practical joint, which is much preferable to an ankylosed one. And not only this, but any joint, as of the foot, ankle, knee, hip, and especially the hand, elbow, and shoulder, can be dealt with in this way. So that, whenever there is ankylosis, it is certainly an indication that the attending surgeon did not at the proper time do his duty, either in taking the appropriate measures himself, or in having some one else do it. There is a special time to do this work, and if it is not done then, the results will not be those expected. If possible, the work should be done at or near the termination of inflammation. At one time it was believed to be improper to go into the joint, but this idea, like many other fallacies in surgery, is a thing of the past. I think that hereafter better

work will be done along the line mentioned in this paper than has been in the past, that this line of treatment is really the beginning, of the end, and that in the near future there will be less cripples as the result of ankylosed joints, than we have seen in the past.

Dr. C. S. James, Centerville—I feel that we, the men on the firing line, are not ascribing to this paper the importance it deserves. We look upon it, very properly, as being the product and the utterance of a recognized specialist in a special line, and fail to appreciate, as general practitioners, the importance of the employment of this particular branch of work. Also from what has been said by the essayist, an inference may be drawn as to the urgent need for this class of work being performed, and therefore, as the subject has to do with a type of surgery the benefits from which are evidenced in any community in which the work is done by restoring to that community a unit in earning capacity and in the ability to enjoy life, it is of great importance to us all.

We are still in the infancy of arthroplasty, and we must expect some failures; we must not expect too large a percentage of perfect results. We are on the frontier line of what promises to open up a wonderful opportunity. But this is the point I wish particularly to bring to your attention: As general practitioners we should be so alert that the necessity for an arthroplasty does not exist among our patients. If we recognize the importance of a thorough case history, if we give proper attention to the tonsillitis, to the tooth infection, to the sinusitis, to the ingrowing toe-nail, to the pus tubes in the male or in the female (and I make that remark advisedly), we will have less of these cases of septic arthritis with their consequent bad results and the necessity for an arthroplasty later on. If we recognize the importance of the presence of temperature and pain referred to a joint, we should apply extension if possible within the first twenty-four hours, thereby making less need for Dr. Steindler to continue his operations in arthroplasty within the limits of this state.

Dr. Steindler—In closing I have very little to add, except in regard to what Dr. James has said. I am an orthopedic specialist, but if you think I am a specialist in arthroplasty you are mistaken—I am not. I am learning. I do not know who is such a specialist. This is a new field and we have to go step by step. A number of these operations I have performed for the first time. When I first had my orthopedic training the subject was unknown, and we are now having to feel our way very carefully. But there is no other alternative, we have to do the best we can. I cannot instruct you in the technic beyond what you know as general surgeons. You see from the few remarks I have made that even the principal points of this question are still being debated. We do not even yet know whether we should use pedunculated material or absorbable material. These questions will be solved very shortly, and I believe they will be answered definitely and scientifically.

PULSE PRESSURE AS A MEASURE OF CIRCULATORY EFFICIENCY*

WALTER L. BIERRING, M.D., Des Moines

In the study of blood-pressure variations, it is necessary to appreciate the clinical significance of its three phases—systolic, diastolic, and pulse pressure. It is also necessary to bear in mind what they mean in "terms of the circulation."

Blood-pressure is defined usually as the arterial tension or pressure of the blood in the vessels within which it is contained. With our usual method of determining blood-pressure by palpation or external compression of the artery, we are really concerned with the "bursting tension" of the vessel.

The bursting tension is the tendency to split a tube at any given diameter, and can be expressed as being equal to $\pi r^2 B$ -Pr. (Pi-radius square, times blood-pressure). An increase in blood-pressure will necessarily increase the bursting tension, and the greatest force of the bursting tension will be exerted on the end-arteries, where the most frequent break in the circulation occurs. All things being equal, the bursting tension is best determined in the vessels of larger circumference, and on this account blood-pressure can be more accurately estimated by palpation of the femoral artery than in the radial.

The several phases of blood-pressure may be defined in various ways: Systolic pressure is the measure of the force of ventricular contractions, modified by arterial resistance and less important factors. Diastolic pressure is the lowest pressure between ventricular contractions. It may be taken as the residual or constant pressure existing in the arterial system between systoles, that is to say, during the diastolic pause. The diastolic pressure represents potential energy, since the blood column exerts pressure of position and not motion during diastole. It is maintained by the tonicity of the arterial system, and measures the resistance against which the systolic pressure is raised.

During systole, when the intra-ventricular pressure equals, or slightly exceeds, the diastolic pressure in the aorta, the aorta valves open.

The pressure of a given volume of blood, leaving the left ventricle, must, however, be considerably in excess of the diastolic pressure in order to force the blood towards the periphery. In other words, when systole occurs, the pressure exerted by the left ventricle, in order to force a stream of blood into already filled vessels, must be in excess of the pressure existing in those vessels. The transfer of energy to the moving

volume of blood must therefore be in the form of dynamic energy, which is energy in motion. The excess of dynamic energy (as manifested by the pulse pressure) represents the actual head of pressure driving the blood towards the periphery. The difference between the systolic, maximum, or variable pressure, and the diastolic minimum, or constant pressure, is the pulse pressure. For practical purposes it represents the myocardial load, since the blood column can not be propelled towards the periphery except through the transfer of energy by the myocardium.

The accuracy in the readings by the auscultation method are much greater than those obtained by palpation. The figures will always be several millimeters higher by the auscultory than by the visual or tactile methods.

From the clinical standpoint there can be no doubt that an estimation of the circulatory load is desirable. It has long been appreciated that patients manifesting hypertension, showed, depending upon the degree of vaso-constriction, various grades of cardiac hypertrophy, which followed as a result of the load carried by the myocardium in the performance of its function.

Likewise it is important from a prognostic standpoint to be able to judge at the time an opinion is rendered in such instances, whether the patient is in greater danger of cerebral hemorrhage or myocardial failure. Advice appropriate to the prevention of the one danger, might not be appropriate to the possible prevention of the other.

Since all patients with marked hyper-arterial tension are usually in danger of one of these two modes of exitus, it becomes important, so far as possible to estimate the probabilities. There are two questions involved; first, in what way do variations of all pressure, the systolic, diastolic, or pulse pressure, affect the mass movement of the blood; and second, in what ways are the diastolic and pulse pressures affected in instances showing objective evidence of cardiac efficiency.

In cardiac hypertrophy, whether due to increased peripheral resistance or to a damaged myocardium or valves, the systolic pressure is, as a rule, increased. In other words, with the necessity for increased work, comes the provision for increased energy. If the hypertrophy occurs as the result of increased peripheral resistance, i. e., increased vaso-tonus or increased sclerosis, the diastolic pressure is likewise increased. Consequently with an increased amount of work to overcome higher diastolic pressure in the aorta, there must, at least, in a compensating heart, be a corresponding increase in the load or pulse pres-

*Read before Austin Flint-Cedar Valley Medical Society, Eagle Grove, November 9, 1915.

sure. In other words, it is the increase in diastolic and pulse pressure which causes the higher systolic pressure in cardiac hypertrophy. The diastolic increase in hypertension is, however, much more constant and less liable to variations than the systolic pressure; while, of course, the pulse pressure or load varies with the demands made upon it. It is as a rule markedly increased in hypertrophied hearts.

The first question which arises in connection with the study of the three phases of blood-pressure is, what is their relation to efficiency of the circulation?

The measure of the circulatory efficiency is the quantity or mass movement of blood passing through the tissues in a given time. This depends on a number of factors (1) chief of which are quantity of the blood delivered to the heart, (2) the force and frequency of ventricular contraction, (3) the elasticity of the arteries, (4) the amount of peripheral resistance. An exact estimate of combined co-ordinated action of these factors is impossible.

A very useful, though only partial, index to efficiency of circulation, however, is afforded by systolic and diastolic pressure considered in their numerical relations, that is the difference between them, which is pulse pressure, and the relation of the pulse pressure to the pressure scale.

Pulse pressure tells us the fall between heart and arterioles is analogous to what is termed a "head of water" in hydrostatics. But this "fall" as an index to efficiency of the circulation, is conditioned to a considerable extent by its place in the pressure scale.

A given pulse pressure in one part of the pressure scale may not have the same value as a factor in the circulation as the same pulse pressure in another part. For example, a pulse pressure of 40 mm. Hg. produced by a systolic blood-pressure of 200 mm. Hg., and a diastolic pressure of 160 mm. Hg. will not naturally be attended by as efficient a circulation as the pulse pressure produced by a systolic pressure of 120, and a diastolic pressure of 80.

A theoretic conclusion, which receives practical support, is that there is a particular place in the pressure scale for each individual and each particular condition, where a given pulse pressure, other things being equal, will produce the fullest circulation, and will at the same time be attended by the greatest circulatory flexibility and reserve power; and that pulse pressure placed above or below this ideal place in the pressure scale, in order to produce an adequate circulation, must ordinarily increase in magnitude, and that such increase means diminution in the flexibility of the

circulation and encroachment on the reserve power of the heart.

If the diastolic pressure fails to fall in just correspondence with a falling systolic pressure, and thereby permits the pulse pressure to become unduly small, clinical symptoms of circulatory insufficiency may arise; and if the systolic pressure fails to rise in just correspondence with a rising diastolic pressure and thereby permits the pulse pressure to become unduly small, the same lessening of circulatory insufficiency may be brought about. The term "just correspondence" used in connection with the rising and falling in reference to each other of systolic and diastolic pressures, is meant an increase in pulse pressure at least adequate to the bare needs of the circulation.

The pacemaker for pulse pressure, at least in conditions of disease, seems to be the diastolic pressure more often than the systolic. Movements of the diastolic pressure for any considerable distance in either direction from its normal place in the pressure scale regularly causes the pulse pressure to increase in size if the circulatory balance is to be preserved. In cases where the systolic pressure rises while the diastolic falls, it is difficult to determine which is chiefly responsible for the increase in pulse pressure. The phenomenon is observed with apparently healthy hearts responding to a transient demand, and also sometimes in cases with pathologic conditions which counterbalance each other. A normal pulse pressure, as well as a normal systolic and diastolic pressure, may be observed in cases which show signs and symptoms of cardiac insufficiency.

Various tests have been proposed from time to time to determine the capacity of the myocardium of an individual. Before the introduction of the auscultory method of blood-pressure and the appreciation of pulse pressure of the pressure pulse, the following were proposed:

1. The increase in the pulse rate between the recumbent posture and the erect posture.
2. The increase in the pulse rate after slowly flexing and extending the right forearm.
3. The increase of the systolic blood-pressure on constricting the femoral arteries, proposed by Katzenstein.
4. The increase of the systolic blood-pressure after certain exercises, suggested by Graupner.

Since it has been possible to accurately determine clinically diastolic and pulse pressure, certain mathematical formulæ have been devised to indicate the conditions under which the circulation is carried on. Of those proposed, as the cardiac efficiency factor of Tigerstadt, the percentage of the pulse pressure formed by the

second phase of the auscultatory blood-pressure reading of Goodman and Howell¹, I have been most impressed by the method of Willard J. Stone², which suggests the determination of a cardiac load and overload factor based on auscultatory blood-pressure determinations. He pointed out that in sixty-one normal persons with an average systolic pressure of 123 mm., and an average diastolic pressure of 80 mm., the pulse pressure average was 40 mm. "The amount of energy expended, therefore, to maintain the circulation is excess of that required to open the aortic valves and overcome the resisting pressure of 80, was 40. The normal load may, therefore, be considered to be 40/80 or 50 per cent. of the diastolic pressure."

In studying cases along this line of thought, it is immediately seen that the load in hypertension and compensated myocardial cases, is increased, the load being in most instances from 75 per cent. to 100 per cent., an overload factor of from 25 to 50 per cent. In decompensation the load may suddenly diminish, pointing to dilatation.

When dilatation occurs, the pulse pressure is diminished until, with marked incompetency, there is but little pressure in excess of that required to open the aortic valves; that is, the diastolic and systolic pressure tend to approximate to each other. The heart load may diminish to 40 per cent., 28 per cent. and 12 per cent.

In aortic insufficiency and pernicious anæmia, the heart load is specially high. In a recent observation of aortic insufficiency, the systolic pressure was 170 and diastolic 70, a pulse pressure of 100, or $100/70 = 143$ per cent., or an overload of 93 per cent. Again in a patient with pernicious anæmia the systolic was 120 and diastolic 60, a pulse pressure of 60, or $60/60 = 100$ per cent., or an overload of 50 per cent.

In comparing the nature of these two conditions, both characterized by high pulse pressure, the circulatory efficiency in aortic insufficiency must always be greater than in pernicious anæmia.

Before discussing the clinical significance of specific variations of the three phases of blood-pressure, it is desirable to state what is considered the normal range in conditions of apparent health. This one is reluctant to do, because there are no definite standards. Blood-pressure conditions in health and disease overlap widely. Pressures which are without pathological significance in some conditions may possess such significance if found in others, and a considerable allowance must be made for individual peculiarities. Only approximations are possible at best, and figures

are offered with the caution that they are subject to many exceptions.

The systolic pressure in healthy young adults ranges from 100 to 130, mostly 110 to 125. At middle age it is ten points higher, and in elderly people twenty points higher. In young adults a systolic pressure below 100 is considered low, as 110 is for the middle aged, and 120 for elderly persons.

The diastolic ranges in young adults from 65 to 85, in the middle aged 75 to 90, and the aged 80 to 100.

The pulse pressure in healthy adults is usually not far from 40, but may vary between 30 to 50 without necessarily possessing pathological significance. A pulse pressure as low as 20, or as high as 60, if persistent, suggests a pathological condition.

Through the kindness of Dr. Fred Moore, Health Supervisor of the Des Moines schools, I am permitted to use the data collected in examining 100 high school students, all males, between the ages of fourteen and nineteen years, and prospective members of the different athletic teams. The average pressure determinations varied at rest and after exercise as follows:

Rest—Systolic 123, diastolic 82, pulse pressure 40, after exercise—systolic 156, diastolic 80, pulse pressure 76. The normal pulse rate averaged 67, and after exercise 81.

This illustrates the variability of systolic pressure, and the danger of relying too much on single determinations, and without due regard of the diastolic readings. It will be noted that the diastolic pressures in this series were not specially affected by exercise.

With the imperfect knowledge of the subject, it is best to approach it from the side of the diseases themselves. Chronic nephritis regularly produces changes in the blood-pressure, which, however, other conditions may modify or counteract. The conditions which most often modify the blood-pressure in chronic nephritis are arterio-sclerosis, myocarditis, and chronic toxæmia. In some cases, one or other of these co-existing conditions may be a more prominent element in the pathologic complex than the nephritis, but in a large and fairly definite group of cases, the nephritis is the predominating condition, and in that group the following changes in blood-pressure may be observed.

The diastolic pressure is regularly raised, and the degree of its elevation is roughly proportionate to the severity of the kidney lesion. This seems to be the most characteristic blood-pressure change in chronic nephritis. The diastolic pressure may rise to only 100 in mild cases, but in

1. Goodman and Howell; Univ. Penn. Med. Bull., 1910, xxiii, 469.

2. W. J. Stone, Jour. Am. Med. Assn., 1913, Ixi, 1256.

severe ones it may rise to 120, 140, 160, and even higher. Along with the rise of the diastolic pressure there is regularly a rise of the systolic pressure and increase in the pulse pressure to meet the changed requirements of the circulation. The systolic pressure may rise to 175, 200, 260, 300, and even higher. In order to maintain this high systolic pressure, the left ventricle regularly hypertrophies.

When this hypertrophy has reached its limit and myocardial degeneration has developed to a notable degree, so that there is no more reserve power in the heart, the systolic pressure ceases to rise, and as the case progresses, it declines.

Then there may be some fall in the diastolic pressure, but not enough to produce a pulse pressure large enough to compensate for the myocardial weakness; the diastolic pressure falls considerably only in the later stages of the diseases, when symptoms of cardiac exhaustion have appeared. The pulse pressure is regularly large, while there is circulatory compensation of the kidney insufficiency. It increases more or less in a geometric ratio with the increase in the diastolic pressure, being in mild cases about 60, which is nearly within normal limits, and in severer cases 80, 100, and even more. With a diastolic pressure of 140, a pulse pressure adequate to maintain circulatory compensation of the kidney insufficiency, will usually be found not far from 100. In this condition the high diastolic pressure is a true criterion of hypertension rather than the systolic pressure. As it persists it leads to cerebral death, by reason of increased bursting tension of the blood vessels. A large pulse pressure goes with the high diastolic pressure, which is adequate as long as the myocardial reserve holds out.

In arterio-sclerosis, the blood-pressure changes seem to be less regular and uniform, less obstinately persistent, and less definitely characteristic than in chronic nephritis, and they seem to be more susceptible to modification by other conditions than in the latter disease.

It is often difficult to disentangle the elements in the blood-pressure picture which are due to the arterio-sclerosis from those due to the other conditions. Moreover, the lesions of arterio-sclerosis differ widely in their intrinsic influence on the blood-pressure according to their character and distribution; some have very little influence, while others, notably lesions affecting the aorta, the coronary arteries, and the arteries of the brain, may have a great influence.

The diastolic pressure in arterio-sclerosis may or may not be raised. It is usually raised when the arterial supply of vital organs is involved, but

the elevation does not seem to be so high, as a rule, as in chronic nephritis. The systolic pressure may be raised to produce an adequate pulse pressure. When myocarditis complicates, the enlargement of the pulse pressure seems often in part to be produced by lowering of the diastolic pressure, thus securing a relief which does not seem to be available in advanced chronic nephritis.

The systolic pressure is a guide for differentiating the hypertension of arterio-sclerosis and chronic nephritis; in the former, being due to sclerosis of vessels, it shows but little variation, and is not affected by nitro-glycerine, while in chronic nephritis it is due to increased (toxic) vaso-tonus, subject to frequent variations, and is modified perceptibly by nitro-glycerine.

In chronic myocarditis, or any condition of myocardial weakness, the systolic pressure shows a tendency to fall below the ideal for co-existing conditions, and the diastolic pressure to accommodate itself to the systolic pressure when it can, and the pulse pressure to enlarge. In uncomplicated myocarditis both systolic and diastolic pressure may be below normal and the pulse pressure larger than normal. The effect of myocarditis may not be strongly evident on the blood-pressure for a considerable time, being apparently spent on the reserve power of the heart; when that is exhausted then the natural effects may appear.

In the acute infections as pneumonia, typhoid fever, influenza, diphtheria, and rheumatic fever, likewise in chronic tuberculosis and wasting diseases, both systolic and diastolic pressures are below normal, and the pulse pressure correspondingly large.

In chronic valvular disease of the heart with good compensation, the blood-pressure is usually not much disturbed, except in aortic insufficiency, in which condition there is a regularly large pulse pressure.

A recent observation in a case of aortic insufficiency of 180 and diastolic of 60, or pulse pressure of 120, the high systolic pressure led to a diagnosis of chronic nephritis, which after the other phases of the pressure were properly interpreted, could not be maintained.

With lost compensation in chronic valvular disease, both systolic and diastolic pressure are lowered, which rise again as compensation is recovered. Pernicious anemia is distinctive with a low diastolic pressure—45 to 60, and large pulse pressure, while the systolic pressure is rarely high—110 to 120 mm.

To summarize some of the significant facts it may be said:

1. A comparatively low systolic pressure with

a comparatively high diastolic pressure and a consequently small pulse pressure may mean myocardial weakness with chronic nephritis, arterio-sclerosis, chronic toxæmia, or arterial spasm.

2. A low diastolic pressure with a comparatively high systolic pressure and an excessively large pulse pressure, may mean several things, i. e., a purely functional condition, a compensated aortic insufficiency, myocardial degeneration without much arterio-sclerosis, or chronic nephritis, or vaso-dilatation from any cause.

3. The diastolic pressure seems to be more stable than the systolic, and the movements of the diastolic pressure beyond the normal range, seems to be a sufficient cause for enlargement of the pulse pressure if an adequate circulation is to be kept up.

4. A low systolic pressure, provided the diastolic pressure is sufficiently low to provide an adequate pulse pressure, does not necessarily mean poor circulation, though it does seem to imply a diminished reserve power of the heart.

5. A systolic pressure of 100 or lower in an adult or a diastolic pressure of 100 or higher, if persistent, suggests disease, and may call for treatment.

6. A pulse pressure as small as 20, or as large as 60, if persistent, may be pathologic.

7. Chronic nephritis seems regularly to be attended by a high diastolic pressure and a large pulse pressure which is adequate so long as the myocardial reserve power holds out.

8. Arterio-sclerosis, as a rule, seems to produce marked elevation of the blood-pressure only when the blood supply of a vital organ is disturbed or when the aorta is effected.

The effect of therapeutic procedures on abnormal blood-pressures must be interpreted in the light of several facts, notably the following: The elevation of the blood-pressure, both systolic and diastolic, as well as diminution of pulse pressure, is more regularly symptomatic.

Therapeutic procedures to correct abnormally high blood-pressure, in order to be rational, should be directed as far as possible to removing the causes of the abnormal pressure, and only in exceptional cases should the treatment of high

blood-pressure be symptomatic, viz., when continuance of existing high pressure threatens accidents to the cardio-vascular apparatus.

In the treatment of abnormally low blood-pressure, a removal of the causes as far as possible should be attempted, and also, more generally than in high pressure, symptomatic treatment may be given. The nitro-glycerine test is useful in determining whether the hypertension is due to arterio-sclerosis or chronic nephritis. It affects of the latter condition, but not the former.

Many of the heart stimulant drugs do not seem to raise the blood-pressure, but even when they do not produce an elevation of the systolic pressure, they often appear clinically to improve the circulation, suggesting that the efficiency of the circulation, that is, the movement of the whole volume of blood, does not depend altogether on the blood pressure condition. It is conceivable that a drug which lowers the blood-pressure may improve the circulation by lowering the diastolic pressure more than the systolic, thereby increasing the pulse pressure. Such may be the case with nitro-glycerine.

The clinical significance of variations in the systolic and diastolic blood-pressures and the pulse pressure is a particularly difficult subject to deal with, both in its entirety and in its parts, not only because it is comparatively new and has not been thoroughly studied, but because of intrinsic difficulties. The possibilities of error in observation and of confusion of data are present in an unusual degree.

The neurotic factor in the patient and the personal factor in the observer requires considerable allowance to be made in the interpretation of the blood-pressure findings and the estimation of therapeutic procedures.

The estimation of blood-pressure results must on no account be regarded as superseding or rendering unnecessary the use of other sources of information regarding the condition of the circulation. Error from misuse of the results of blood-pressure estimation, by blind adherence to mechanical standards, is easily avoided by common-sense application of other obvious signs taken in correlation with the blood-pressure data.

ABDOMINAL TRAUMA*

OLIVER J. FAY, M.D., Des Moines

When your Secretary honored me with the invitation to read a paper before you this afternoon, the question of a suitable subject at once presented itself. "Diseases and Surgery of the Gall-bladder" appealed to me as a field in which internist and surgeon meet on common ground, and one in which diagnosis and treatment still present many problems. But after some further consideration of the matter, I decided instead to speak on "Abdominal Trauma." The gall-bladder patient whose doctor has failed in diagnosis may live in misery for years, but his search for relief will in time put him in other hands, and the first doctor loses his patient to a more competent man. The doctor who makes a mistaken diagnosis in the presence of a ruptured viscus, also loses his patient—but it is to the undertaker. In acute lesions of the gall-bladder, diagnosis seldom presents special difficulties, and in chronic conditions we may give as much time as necessary to the case. In abdominal trauma, the time factor is not one of months and years, or even of days; a decision for or against operation must be reached within the first six hours, or before peritoneal soiling has called forth a beginning peritonitis. Internal hemorrhage and infection from a ruptured viscus make any delay fatal. On the other hand, these patients are not normal operative risks, and an unnecessary operation is to be avoided. And since the majority of these cases are first seen by the general practitioner, he must be cognizant of every diagnostic help, prepared to meet every operative emergency intelligently. Yet the text-books give few definite precepts, and personal experience is dearly bought. If, therefore, I succeed in bringing you even a single practical working rule, I shall feel well repaid for my effort.

The subject of penetrating wounds of the abdomen may be disposed of in few words, for here diagnosis and therapy are one. The patient is at once prepared as for an emergency laparotomy. Ether anesthesia is to be preferred, but if contra-indications are present, local anesthesia may be employed. After a free application of iodine, the wound is carefully enlarged until its base is reached. If it is found to penetrate the peritoneum, the wound is still further enlarged, or a mid-line incision is made to permit of a careful examination of neighboring viscera. Hemorrhage is controlled, perforations closed, tissue damaged beyond repair is resected, and the

abdomen closed with drainage. Where the peritoneum is not penetrated, the decision for or against drainage and the method of closing the wound rests with the type of the injury and the condition of the injured tissues.

In approaching the infinitely more complex problem of subcutaneous injuries, the history of the accident must be first considered, though the data thus obtained is suggestive, not decisive, since there is often a striking disparity between the trauma and the resulting injury. A fall upon the buttocks which locally did not produce even ecchymosis, has resulted in a rupture of the gut, while, conversely, the application of great force directly over the abdomen has determined only severe injury to the abdominal walls, the viscera remaining intact. This apparent incongruity between the trauma and the resultant injury, is in part due to the failure to consider all the trauma factors, of which the force applied is but one. The angle of its application, the time which has elapsed since the ingestion of food, since defecation and micturition, are other factors. In a general way, compressive force, as when a trainman is caught between the bumpers, may be said to tear, rupture or bruise. Percussive force, illustrated by the kick of a horse, ruptures or bruises. A fall, the victim striking upon feet, back, or nates, is the most frequent form of concussive force, and here the tearing of organs from their attachments is to be looked for.

Shock is usually the first symptom to be looked for, but the nervous stability of the patient and his susceptibility to pain play so large a part in its causation that it is of little diagnostic worth immediately following the accident. Shock which is the result of a general insult to the nerves or of poor nervous equilibrium should show gradual, though sometimes slow, improvement, and when such improvement is not manifest within the first few hours, visceral injuries is probable.

Early variations in pulse and temperature are closely allied to the degree of shock. A later rise in temperature signifies beginning peritonitis, though peritonitis is not always accompanied by fever. A later fall in temperature, with a rapid pulse, symptoms of acute anemia, a marked decrease in hemoglobin, an increasing area of iliac dullness, all point to hemorrhage within the peritoneal cavity.

Pain, like shock, is so much a matter of individual susceptibility that much of its diagnostic significance is lost. Localized spontaneous pain, and pain on deep pressure (not the pain from bruised abdominal walls) are chiefly of confirmatory value, strengthening the diagnosis

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• which has been based upon the presence of thoracic breathing and abdominal rigidity.

Tympanitis appearing immediately after the injury is usually of benign significance, since it denotes the absence of abdominal rigidity. When tympanitis develops after some hours it is an indication that peritonitis is developing, and that the attending physician has failed to reach the decision for operation within the time interval when operation would have promised most.

Thoracic breathing may be nothing more than an attempt to escape the pain caused by bruised muscles, but often it is a protective phenomenon, the superficial breathing serving to protect a damaged viscus from further injury. It is not in itself pathognomonic of visceral injury, but it is strongly confirmatory in the presence of abdominal rigidity.

While abdominal rigidity is not an infallible sign of visceral injury, it is our most valuable symptom. In exceptional cases it may even be absent where there is a perforation in the gastrointestinal tract, but in every case where board-like rigidity is present, operation must not be delayed. Rigidity is most frequently found in the presence of ruptures of the stomach and gut, and in just these cases it is of most value, for here there are no symptoms of hemorrhage to guide us in our decision for or against operation.

There is one infallible rule in cases of abdominal trauma: immediate operation is indicated in every case in which there is localized spontaneous pain, thoracic breathing, and abdominal rigidity, even where ideal operating conditions cannot be secured. These three symptoms are the great diagnostic triad, but even in the absence of localized spontaneous pain and thoracic breathing, I should not hesitate to operate if board-like rigidity were present.

The general diagnosis of ruptured viscus, carrying with it the decision to operate, is the all-important thing in cases of abdominal trauma, but differential diagnosis is also of interest and is of some practical importance in determining the placing of the incision. A definite differential diagnosis is practically impossible, but a tentative diagnosis may be based upon various suggestive symptoms.

In injuries to the liver, hemorrhage is the dominant symptom and is the usual cause of fatal issue. In the presence of increasing iliac dullness and acute anemia, it is an easy matter to make a diagnosis of intra-peritoneal bleeding but the diagnosis of rupture of the liver is largely based upon negative evidence, i. e., by a process of elimination. If on catheterization no blood is found in the urine, the kidneys and bladder may

be ruled out as a probable source of the hemorrhage. In the absence of blood from stomach contents and feces, the stomach and bowel are excluded. Even tentative differentiation of hemorrhage from liver, spleen, and mesentery is often impossible. Hemorrhage from the spleen is often, but by no means always, confined to the left side of the abdomen. Rupture of the liver is the most frequent abdominal injury while hemorrhage from the mesentery is rare; the weight of evidence is thus in favor of the former. Consideration of the type of injury and its localization is also helpful.

We have already seen that rupture of the spleen has no typical symptomatology. It is well to remember that percussive force here plays the most important role, and that injuries to the spleen are far more frequent in malarial districts.

Injuries to the pancreas are in most cases associated with injuries to other organs, and for this reason a careful examination of the pancreas should never be omitted when the abdomen is opened following an injury to the epigastrium. In most of the reported cases of isolated injury to the pancreas, the patient has not given the impression of being seriously ill immediately following the accident. The symptoms which developed after a few hours were essentially those of an acute pancreatitis, severe pain in the epigastrium, vomiting, and the usual symptoms of a beginning peritonitis.

Ruptures of the stomach are rare compared to ruptures of the intestines, and are usually the result of violence applied over a circumscribed area. Shock is profound in most cases, while pain is of early onset and persists after the subsidence of symptoms of shock. It is at first localized, but with the onset of peritonitis, becomes diffuse. There are eructations, nausea, and vomiting. Thoracic breathing and abdominal rigidity are usually present. The stomach contents may or may not contain blood. With the escape of the stomach contents into the abdomen, peritonitis develops with a rapidity which is governed by the quantity of material escaping and by its bacteriology.

With the exception of injuries to the liver, injuries to the intestines are the most frequent traumatic lesions. Nausea, eructations, vomiting, variations in the pulse, and thoracic breathing are all observed in many cases, but they are not pathognomonic of ruptures of the intestines for they are present not only in injuries to the other viscera but also in cases of shock following abdominal trauma without visceral lesions. Abdominal rigidity, always significant, is of maxi-

imum importance in rupture of the intestines. The presence of localized spontaneous pain is confirmatory evidence, as is also thoracic breathing, but the latter is less frequently observed than in cases of injury to the upper abdomen.

In injuries to the kidneys, hematuria is a relatively constant symptom. The pain is usually well localized, and the muscles of the epigastrium may be rigid on the injured side. The output of urine may be lessened or complete anuria may result. Not only are injuries to the kidneys less difficult of diagnosis than most other intra-abdominal lesions of traumatic origin, but they are relatively benign. Spontaneous healing sometimes occurs, and in practically all cases the time elapsing before operation becomes imperative, is relatively long.

Ruptures of the bladder are usually associated with fractures of the pelvis. Distention renders the bladder particularly liable to rupture, and ruptures in the intoxicated are often reported. The application of force over a considerable area plays a far more important role here than in ruptures of other viscera. Shock is usually profound and pain in the bladder and supra-pubic region is often severe. The bladder contains blood, or blood mixed with urine, unless the rent has allowed its escape into the peritoneal cavity. Most characteristic, however, is a great and painful desire to urinate and the inability to do so. Late diagnosis is, as always, easy, for in intra-peritoneal ruptures the onset of peritonitis, in extra-peritoneal ruptures the burrowing of the extravasated urine, becomes only too apparent.

Since the amount of force applied, the angle of application, and the condition of the viscera vary in each case, it must of necessity follow that the resulting lesions are as widely different, and that no fixed operative technic will apply to any considerable number of cases; operative treatment must be in the fullest sense individualized. Yet there are certain basic rules which are of real service, and which cannot with impunity be ignored. Such are general anesthesia; speed and gentleness in manipulating tissues; a thorough examination of the entire abdomen; the control of hemorrhage, and the safeguarding of the peritoneum from contamination.

A general anesthetic is indicated in every traumatic lesion of the abdomen, open or subcutaneous, which requires operative treatment. The scope of the operation is rarely known when operation is undertaken, and a general anesthetic enables the surgeon to deal with any condition found without loss of time.

Trauma patients have to contend with a double burden—the trauma of injury and the trauma

of operation—and their chances of recovery are better where the minimum of time is spent in operating. Gentleness in handling tissues is always a salient difference between the operating mechanic and the surgeon, but here such gentleness is of vital importance. Rough and unnecessary handling of tissues can not be too strongly condemned.

In glancing through the literature on trauma, one is impressed by the percentage of mortality directly due to the surgeon's oversight. Diagnosis is made and operation undertaken within the hours of grace; a transverse tear in the mesentery is located, a skillful resection and anastomosis done, only to have the patient die a few hours later from hemorrhage from a ruptured spleen; or the abdomen is found full of blood, the hemorrhage is traced to a ruptured liver, the rupture is effectively tamponed, but in a few days the patient succumbs to peritonitis from a perforated gut. The surgeon must never assume that the first lesion he chances upon is the only one, but must in every case make a systematic examination of each viscus. With this purpose in mind, the primary incision should be a generous one. Where the force has been applied over the entire abdomen or over the lower abdomen only, the mid-line incision, carried from xyphoid to symphysis if necessary, should be employed. Where the traumatizing agent has acted over a circumscribed area high in the flanks, a long right or left rectus incision, giving free access to liver or spleen, is to be preferred.

In injuries to the liver, spleen, mesentery, and occasionally also the kidneys and pancreas, the danger to life lies in the excessive hemorrhage, while in ruptures of the gastro-intestinal tract, the pancreas, and the bladder, to a certain extent also the kidneys, infection and peritonitis bring about the fatal issue. In the former group, tamponing is the procedure of choice in all minor injuries, the abdomen then being closed with drainage. Where there are more extensive lacerations of the spleen, splenectomy must be performed, or should extensive adhesions make this impossible, the functional blood supply should be cut off by ligature at the hilum, the spleen well tamponed, and ample drainage provided.

In ruptures of the liver, tamponing may be combined with ligation of the larger vessels, or by the placing of through and through sutures, large size catgut and a blunt round needle being used. Where the tissue has been badly damaged, resection of a lobe may be necessary. The use of autoplasmic tissue tampons, muscle, fascia, subcutaneous fat, or omentum, may be resorted to to control obstinate hemorrhage.

In all injuries to the epigastrium, the pancreas should be examined, for rupture of this organ most frequently occurs in association with injuries to neighboring viscera. Simple tears in the gland may be closed by suture. A few deep sutures are employed to approximate the torn surfaces and secure hemostasis. The capsule is then carefully sutured. Special care must be taken to suture the pancreatic duct if it has been severed because of the baleful effect of pancreatic juice, and for this same reason free drainage is to be employed whatever the operative procedure. Where a portion of the pancreas has been badly crushed or completely severed, a resection must be done. Experimentally four-fifths of the gland has been successfully removed, and in a case of acute pancreatitis in my own practice, it was necessary to remove the major part of the gland. The patient recovered and now after two years is still enjoying good health while the urine has remained practically sugar free.

Rents in the stomach are closed by a double row of sutures, the first passing through all the coats of the stomach, the second through muscularis and serosa only. The peritoneal toilet must be carefully performed, and the abdomen drained through a stab-wound in the pelvis.

Small rents in the intestines are also closed by a double row of sutures. Where a "blow-out" has occurred opposite the mesentery, an elbow anastomosis is made by trimming away the damaged tissue and suturing the gut at an angle. If an injury to the mesentery interferes with the blood supply of a loop of gut, if the damage to the bowel has been extensive, or if there are several perforations within a short distance, a resection must be done and an end-to-end or a lateral anastomosis performed. The peritoneal toilet is carefully made and drainage is employed. If the patient's condition is so precarious as to make an anastomosis an unwarranted prolongation of the operation, the ends of the gut may be brought out through the abdominal wound until it is possible to complete the operation.

Isolated injuries to the kidneys are the only intra-abdominal lesions of traumatic origin which may be treated expectantly. In cases of severe hemorrhage, persistent and alarming anuria, a mass in the abdomen, which remains unchanged, or increases in size, and finally in all cases of infection, operation is indicated. Lesser tears in the kidney parenchyma may be treated by simple tamponing and drainage. Isolated tears, for which tamponing does not suffice, may be sutured. Where too much damage has been done to permit of treatment by either of these methods, I prefer

nephrectomy, although partial resection of the kidney has been recommended by some writers.

Tears in the bladder should be closed by continuous suture by the Czerny-Lambert method. The bladder is closed in layers, the stitches which penetrate it being of catgut to safeguard against there serving as a nucleus for stones, while the remaining sutures are of silk. A drain is placed behind the bladder and brought out through the supra-pubic incision. A retention catheter is necessary if the rupture is near the trigone; in other cases frequent catheterization will suffice. In extra-peritoneal ruptures with extravasation of urine, all the pockets must be cut down upon and free drainage established.

Following operation, the abdominal trauma patient should receive the treatment given the peritonitis patient. He is placed in the Fowler position, all food by mouth is withheld, and normal salt solution is administered by continuous proctoclysis.

VACCINE THERAPY*

GUTHRIE MCCONNELL, M.D., Waterloo

Although it had been known for a number of years that there were substances present in the blood which brought about the ingestion of micro-organisms by phagocytes, the nature of the reaction was not clearly understood.

It was not until Sir Almuth Wright in 1903 brought forth his theory of "opsonins" that a rational explanation of the process seemed to have been found. Contrary to the beliefs of preceding investigators, he held that the action of these unknown substances was upon the bacteria and not upon the phagocytes. He believed that there were certain materials within the blood which prepared the bacteria so that they would be tasty morsels for the attacking leucocytes. The word "opsonin" incidentally means "to prepare food for."

It was, of course, necessary to prove his contention, and this was easily done. If an emulsion of bacteria is mixed with an immune serum and leucocytes, we will find phagocytosis occurring. If, however, we mix the bacteria with leucocytes that have been washed free from serum, there will be no phagocytosis. In order to prove that the effect is on the bacteria, we expose them to the serum; then after washing them thoroughly they are mixed with some washed leucocytes, and we find that phagocytosis will take place.

At the same time that Wright was working on the opsonic theory he was attempting to devise a

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method by means of which the degree of response by the body could be estimated. He finally elaborated the "opsonic index," which although regarded very highly at first, has been consigned to the scrap heap for a number of years. It is a complicated procedure, and with the same specimen different results will be obtained by different competent men. It is based upon a comparison of the ratio of the number of bacteria ingested by a given number of phagocytes in the patient's serum, to the number ingested by the same number of phagocytes in the presence of normal serum. As a result of the inaccuracy of the process and its difficult technic, it has been abandoned, particularly as the clinical course of the disease is a better guide to the efficiency of the treatment.

What, however, interests us to a greater extent is the practical application of this therapy that tends to increase the amount of the opsonins in the blood. In considering this treatment it must be remembered that there is a very great difference between it and serum therapy, in that the vaccine treatment produces an active immunity, one that depends upon the stimulation of the cells within the body, while serum therapy, as generally understood, brings about a condition of passive immunity.

This method, we will find, may be employed either as a prophylaxis or as a treatment against the disease itself. By increasing the amount of opsonin in the blood before the disease attacks us, we are better able to resist its onslaught.

It is in the consideration of the treatment that most of our time will be devoted, although the great value of vaccines for prophylaxis, as in typhoid fever, is well recognized.

The question that now arises is "How is the desired effect brought about by the introduction into the body of living or dead bacteria?"

Before answering that we must briefly call attention to some facts of bacteriology. On account of a general familiarity with the subject, it has become a common habit to speak loosely of the toxins of bacteria. From the point of view of the immunologist or the bacteriologist, this term, toxin, has a very greatly restricted meaning. Before a substance can be so considered, it must conform to some half dozen laws. We will find that with the exception of the bacilli of tetanus and diphtheria, and one other type, the overwhelming majority of bacteria are not true toxin producers, consequently our bodies must have some other means of protection than by the formation of antitoxins, and it is here that we call upon the opsonins.

According to Wright's theory, it is held that

in chronic and localized diseases there is little or no stimulation of the body cells and consequently no formation of protective substances. The stimulation necessary, therefore, was to be provided by the injection of modified and attenuated bacteria, in this way arousing to action, cells that had not been participating. In a way it is well illustrated by comparison with a lazy horse, one that can work but will not; the introduction of the bacteria acts as a lash, the cells respond and the patient recovers.

We must not forget that this applies mainly, as just stated, to localized and chronic conditions. When dealing with acute processes, we have a very different proposition. In such cases, vaccines, if used at all, must be employed with great caution. In these patients, the entire body, or at least most of the cells that composed it, may be working at full power, if stimulation be then applied, the entire organism may collapse on account of the limit of endurance having been reached. One should not drive a willing horse to death.

There is, however, one disease, pneumonia, somewhat of the nature of a general infection in which vaccines seem to have been useful in the acute stages. This apparent contradiction may possibly be explained by a peculiarity of the causative organism. When the pneumococcus grows in animals, it forms a capsule which probably acts as a defense against the protective forces of the body, by giving a vaccine in which the organisms are not encapsulated, the body cells may be so stimulated as to be ready to attack the invader at the earliest opportunity.

Although the vaccines have proved so beneficial in many instances, one should not omit general treatment. It is quite evident that successful results cannot occur if the underlying factor is neglected. A discharging sinus will not clear up if a fragment of dead bone, or other foreign substance is allowed to remain.

As to the actual nature of the opsonons there is considerable discussion. Victor Vaughan believes that they are probably proteolytic ferments of a specific nature. Others liken them to complement and to amboceptor. This, however, is not a matter of importance to the clinician.

After having determined that bacterial vaccines are actually of value in the prophylaxis and treatment of disease, the question arises as to which is the more effective, the living or the dead bacteria. On theoretical grounds the former should exert the greater effect, and such has been found to be the case where they have been used. The great objection to such is the fact that they are too dangerous. Although the or-

ganism might be attenuated, yet there always remains the possibility that some of them might not have lost their virulence. Another danger is that the inoculated person might become a chronic "carrier" of the bacteria, and although immune himself, might be a source of infection to others.

One of the most important of all the matters relating to vaccine therapy is the case of stock vs. autogenous vaccine. Which is the more useful? There is little doubt that in the very great majority of conditions the autogenous is the more efficient. Consequently it should be employed whenever possible, as there are great variations in different micro-organisms of the same species. One may be much more virulent than another, and it has been found that one strain may not protect against another of the same family. For those reasons we will expect more satisfactory results if we can isolate the particular bacterium from the case itself.

At times, however, it may be very difficult to obtain a pure culture or else the vaccines are to be used as prophylactics, and then the stock vaccines must be employed. Then too in one very widespread disease, tuberculosis, it has been found that the results with the stock vaccines are as favorable as those with the autogenous. In tuberculosis the question of time has to be considered as the tubercle bacilli grow very slowly and weeks must elapse before there is sufficient growth for a vaccine.

In prophylactic work there is of course no other way than by the use of stock preparations, as the individual is free from the infecting organism. That these are valuable, is shown by the wonderful results that have been obtained all over the world in regard to typhoid fever.

At first the bacterial vaccine treatment was hailed with delight, and marvelous cures were anticipated, but when they did not immediately materialize, the method fell into some disrepute. This was probably due to the widespread idea that all that was necessary was to send to the factory certain specifications and then try to fit what was received to the individual. The human race has certain characteristics in common, but we do not all try to wear a stock size of clothes. It would simplify matters greatly if we could, but we are not built that way. So it was with the vaccines, a stock staphylococcus culture could not be expected to suit every case of furunculosis. Then again how could the doctor determine by merely looking at his patient whether it was an aureus, citreus or albus variety that was wanted. In order to chance hitting something, stock vaccines were made up with all three, but to give a dose of aureus that would be effective, would be

unsafe because the patient would be getting large doses of the two bacteria that were not concerned.

If good results are to be obtained, one must first isolate the organisms present, and decide which one or ones are in all probability the active agents. When that has been accomplished the autogenous vaccine can be made and carefully administered. When dealing with such comparatively unknown substances, the administration of them must be undertaken very carefully.

For a long time there was much talk of a "negative phase" and how one should avoid giving vaccines at such a time, but it is rather doubtful if there is such a thing. It is difficult to imagine how the opsonins already present in the blood could be decreased.

In the giving of these vaccines, it is necessary that enough shall be introduced to cause some reaction, but it should not be overdone. Occasionally there may be a local reaction at the site of the inoculation in spite of all aseptic precautions. This is most likely due to the preservative that is in the vaccine. We seldom have an abscess form. A local reaction is not desired, but usually one prefers to have a slight focal and constitutional reaction as it indicates that the results will probably be good. In a case of furunculosis, one or two new lesions may develop or an old one become slightly worse. These are good signs and should cause no alarm.

A difficult question to decide is that of the dosage. The laboratory worker is frequently asked as to how many million organisms should be given. A definite answer is practically impossible as the amount depends upon so many things, the condition of the patient and his ability to react. It varies according to whether the infection is acute or chronic, the nature of the organism used, age, etc. The dose should be sufficient to give a mild focal or general reaction. One must feel his way. The first dose had best be small, and if no reaction occurs within forty-eight hours, give a second and larger one. When a reaction is obtained, that is evidence that the dose was large enough, and it should be repeated at intervals of five to seven days. As long as there are focal or general reactions, do not increase the dose.

As a result of experience, certain average doses for adults have been determined, and are as follows:

| | | | |
|----------------------------------|-------|----------------|-----------|
| Staphylococcus aureus | ..... | 100 million to | 1 billion |
| Staphylococcus albus and citreus | ..... | 200 | " 1 " |
| Typhoid bacilli | ..... | 250 | " 1 " |

| | | |
|--------------------|----------------|-------------|
| Colon bacilli..... | 100 million to | 1 billion |
| Streptococci | 25 " | 200 million |
| Gonococci | 25 " | " " |

These are merely averages, consequently every patient has to be considered somewhat as a law unto himself, and the dosage carefully determined.

In briefly summing up the subject of the paper it will be found that the vaccine therapy is a very valuable adjunct to our other methods, as long as it is properly applied. It is not a cure-all, it cannot be used in an indiscriminate manner, but there are many forms of lesions in which it is most useful. In selected cases an autogenous vaccine will frequently effect a permanent cure after all other means have proved valueless.

PRESIDENT'S ADDRESS BEFORE THE MEDICAL SOCIETY OF THE MISSOURI VALLEY*

GRANVILLE N. RYAN, M.D., Des Moines

Members of the Missouri Valley Medical Ass'n:

I deem it my pleasant duty to express my sincere appreciation for the distinguished honor conferred upon me at your last annual meeting. It was surely one of the pleasant surprises of my life. To say that I have enjoyed the duties that have fallen to my lot, as your chief executive, is mildly expressing it, and I thoroughly appreciate the aid and co-operation of the officers and members—when called upon to do their part each have responded in a gracious and willing manner.

The character of the papers read at the meetings speak for themselves. The invited guests at our Omaha meeting were most cordially received and proved to be an inspiration to the occasion. Prof. Williamson of Chicago, in his memorable oration, expelled the time honored ideas of acute dilatation of the heart following extreme exertion. Prof. Albee of New York, in a masterful and scientific way, demonstrated the usefulness of the bone graft. Prof. Reuben Peterson of Ann Arbor, delivered an interesting address entitled "Under What Circumstances is Craniotomy on the Living Child Justifiable." Prof. Arthur A. Law, of Minneapolis, told in a scientific and practical way "The Status of the Auto-Graft." In fact, the entire program was excellent. At our present meeting we are greatly honored by a few of the world's greatest surgeons and internists. It is only to speak the names of J. B. Murphy and George W. Crile and Samuel Robinson to realize that we have with us three masters in the world's field of surgery, while to speak the names of Drs. Robert H. Babcock, Charles Lyman Green and John A. Wither-

spoon, we acknowledge three of the great leaders in preventative medicine, and by referring to your program you will at once realize that our essayists are among the leaders of our profession in this great Missouri Valley and central states.

In casting over the fertile fields of medicine and surgery to decide upon a subject that might prove interesting to you this evening, I decided upon making an inventory of the capital stock of the general practitioner, realizing how few give this most important subject the consideration it is entitled to. If this is found necessary in the business world, why should it not be even more important in the various professions, especially the members of that profession to whom is entrusted the most sacred trust, *the life of a human being*. Have we stopped to consider why the capital stock of a few members of our profession, in every locality, is above par, while that of others is at par, but a large percentage is below. It must be admitted that efficiency *is and must be the slogan*—and will soon place the capital stock of the new doctor at least on a living basis. This stock may be placed slowly at first, but the first share usually will sell the second, and so on. And if the office is properly equipped with files containing carefully recorded histories, laboratory, X-ray, chemical and microscopical findings, then these shares will go faster than was at first anticipated, and we soon see our 'doctor friends' stock generously taken, and he finds himself adrift upon the sea of the laity's confidence. To be able to shun the dangerous shoals, it will be necessary for him to act honorably, conscientiously, and in an unselfish manner. It would be well to tack the golden rule high upon the bow of life's ship, and consider the patient's interest as you would wish yours to be considered if you were the patient, and if called to see a patient of a brother practitioner, compliment the doctor's work as you would like yours to be complimented, remembering that every knock is a boost of the stock of the competitor. Figuratively speaking, "It is well to remember the Maine," and in so doing it will be unnecessary to "man the life boats"—to be able to shun the inevitable submarines. We increase our own capital by being above petty jealousy and envy, also by realizing that there isn't a member in our profession that ever becomes big enough to become clannish and ignore other reputable members in his or her community. If perchance one should exist, then it is plain that he has in some unfair way cornered the market, and the profession should cash in before his stock drops. Sooner or later the medical profession will give him a wide berth on consultations.

If we do not wish our stock to depreciate, it is

*Read at Des Moines, September 24, 1915.

necessary to appreciate our limitations and govern ourselves accordingly. If we are internists, let us refrain from encroaching upon the specialist in any way. We should realize that *our trust* is a sacred one, and not boost our stock by referring our patients to the specialist who slips back the largest percentage, but demand that the case be returned with the best possible end result. If all adopt these tactics, suits for mal-practice will soon be ancient history, and the different ophthalmists will be forced to take the pick and shovel and earn their daily bread by the sweat of their brow.

It is well worth while for the public to realize that the rank and file of the profession today are competent, and that the advice extended should have far more weight, than when it rolled off the tongue of the dear old family doctor of old. It would be well worth while to consult the family physician before trying to hitch their fate to a faddist, which sooner or later disappears as mysteriously as a rainbow, leaving only a cancelled check as a souvenir to act as a gentle reminder of the fact that, "It is better to have been stung and lost than never to have been bitten at all." If the laity expect to have their bones mended when broken, they must show some evidence of appreciation and stem the tide of mal-practice suits that are on *high speed*, with mufflers open, in every state. They must remember that the day of miracles *is not past*—with bone transplantation the lost member is made anew. The hunchback is lifted from his time worn fracture bed, and by such men as Albee, Crile, Murphy and the Mayos, a new breath of life is transplanted and he goes forth with more backbone than he had when he was born, to face the world and work out life's problems.

When we see these great epidemics melt away before the untiring efforts of our Research Workers, whose workshops have been dedicated to God for the benefit of man, can they look squarely into the eye of the true physician and say that they haven't the utmost faith and confidence in him and what he is doing for mankind?

While it is apparent that the various specialists have encroached upon the stock of the general practitioner, yet to be able to get the best possible results, we must support the different specialists. The new era calls for a less number of patients and a more thorough working out of each individual case, and to do this we must be associated with the surgeon, the pathologist, the laboratory assistant. Team work all along the line is imperative. The diagnosis is to be made after every angle has been **cited**, and the prognos-

is must be most searching of the entire horizon. We must be able to predict the on-coming complications and if possible institute preventative measures early. In tonsillitis let us form the mental picture of local and general adenopathy, neuralgia and neuritis, acute articular rheumatism, osteo-myelitis and of ulcerative endocarditis—where there is evidence of localized or generalized infection let us not stop at the tonsils, but examine the teeth, the deep seated infections of the maxilla, the antrums, the sinuses, the gall-bladder, the appendix, the prostate, the gastrointestinal, the respiratory and the genito urinary tracts. These should all have careful consideration. Many of the severe complications and syndromes can in this way be checked up and safe and sane treatment instituted, even though it is a border line case.

The axiom, "Hold on to all that is good" is a most excellent one, and yet we can't afford to be to pessimistic. The spirit of investigation should be fostered—encouraged rather than hindered. This heritage in which we all have stock, was founded and nursed to life by such great men as Huxley, Virchow, Lister, Pasteur and Koch. The evolution in medicine was precipitated by these great leaders, and the practice of medicine was transformed from an art into a science.

PERORAL ENDOSCOPY*

FREDERICK ROOST, M.D., Sioux City

Operative and other procedures on the air passages and pharynx by direct vision, although still of recent advent, has been so well studied in literature and clinically, that I need offer no review of the subject.

Deep bronchoscopy and esophagoscopy, I venture to say, is not generally practiced by the average specialist, as proficiency in this procedure is still limited to a few laryngologists, who have made this a particular study and practice.

It has been my experience that deep bronchoscopy cases are comparatively rare. In the five years during which I have used the endoscope, I have had nine foreign bodies in the larynx and hypopharynx, and only four in the bronchi.

As a means of diagnosis and in treatment of the larynx, the direct method is invaluable. Hence I would observe that while one might dispense with deep and more difficult bronchoscopy and gastroscopy, the easier art of laryngoscopy and pharyngoscopy should be mastered by all laryngologists.

*Read before Sixty-fourth Annual Session, Iowa State Medical Society, Section Ophthalmology, Otology, Rhino-Laryngology, Waterloo, May 12, 13, 14, 1915.

No doubt, in the discussion today, claims of superiority of the suspension method over that of the closed tube will arise. The suspension method while recent, has acquired many advocates, and is certainly an advance, in that it affords a more comprehensive and open field of illumination. It should prove superior in laryngeal work when proficiency is acquired. It is certainly more difficult, and its limitations is admitted in adults.

It is not difficult to acquire proficiency in the use of the laryngoscope of American makes. In the office they should be to hand and ready for use. With dry batteries and tungsten lamps, they give a splendid illumination. Foreign bodies in the larynx, such as a sand bur, sometimes serious and distressing cases to handle, can be relieved with ease and dispatch. This work can be done in the office with local anesthesia.

I find the hypopharynx less easy to anesthetize. Local anesthesia will not prevent gagging. I never attempt to introduce the pharyngoscope into a child, unless under a general anesthetic. Furthermore I see no contra-indication in a general anesthetic for adults that give us trouble. Impacted foreign bodies in the hypopharynx are of common occurrence, and it is in these cases that the real worth of the direct method is demonstrated. Foreign bodies that have evaded the grabbing forceps, probang and coin-catcher until the parts are lacerated and swollen, have yielded in a few minutes, without distress to the patient. Indeed the results are so brilliant, as to embarrass the preliminary, bungling attempt where such have been made, and they are frequently made, as you have all witnessed. I wish to note that where foreign bodies have remained in the hypopharynx and esophagus for a considerable length of time, they take on a coating that sometimes makes them difficult to locate in the mottled and swollen membranous folds.

The same difficulty arises in the task of outlining a stricture, due to a too recent action of a corrosive substance. I wish to emphasize the usefulness of the esophagoscope in the diagnosis of esophageal lesions, or its use in verifying a diagnosis of an esophageal disease along with the employment of radiography and other means. It should prove a great aid to the surgeon and internist.

A few remarks on bronchoscopy. In my experience, the patients were all under four years of age. Three were leguminous bodies, two corn kernels and one peanut. I am unable to find detailed accounts in bronchoscopy literature, as to how these bodies are grasped by the operator while in the bronchi. On account of the age of

two of the patients—under two years of age—a tracheotomy was done, and in both cases the bodies were expelled in a fit of coughing. Here, I wish to emphasize the importance of holding open the wound constantly, to facilitate the emergence of the foreign body. The reflex dangers of allowing foreign bodies to be thrown up into the larynx has been remarked by other writers.

In my experience, I have found young patients that were quite intractable, and am sure could never be brought under the suspension apparatus without a general anesthetic. With mild coaxing, they will yield quite satisfactorily to the unobtrusive laryngoscope. One patient without warning, jumped from the chair and flung me and the instrument, in opposite directions, without harming herself. We cannot always foresee what our distressed patients may do under manipulation.

In our territory, the lodging of sand burs in the larynx, is of frequent occurrence. Carefully following the literature of the laryngologists the past several years, I note this occurrence rarely mentioned. It is an accident, usually occurring in the fall of the year. The history generally given, that it happened while extracting the bur with the teeth. My hypothesis is, that the tongue is pricked causing a quick reflex inhalation, which causes the bur to be carried into the larynx—usually lodging under the anterior commissure—a place difficult from which to extract such offending bodies. And I can recall unfortunately, a number of such cases, in which the bur was gotten only after a thyrotomy. To date, I have had six sand bur cases, all removed successfully, and without much difficulty, with the endoscope.

Among my cases I wish to report a successful removal of a giant tumor from the larynx, by the direct method. This tumor was diagnosed a soft fibroma, weight 60 grains. It was pedunculated and attached beneath the anterior commissure. A straight snare was used. Before severing the tumor's pedicle, the growth was lifted above the vocal chords, by gentle traction on the loop.

A four-year old patient was brought to me for an adenoid operation. The child had had aphonia for two years. Under general anesthesia the laryngoscope was introduced and a large papillomatous growth removed from the anterior region of the larynx—evidently from the anterior commissure. These cases occur in the average practice. Without the endoscope, relief for these cases would have been difficult. Some would have suffered unnecessary operations, and a few remained undiagnosed.

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THE DETROIT MEETING OF THE AMERICAN MEDICAL ASSOCIATION

The time has passed when it may be said that a particular session of the American Medical Association is a success; all are successful, differing only in degree. It is doubtful if at any time in its history, more general interest was manifested in its welfare than at Detroit. The peculiar industrial development of this city has brought together in all classes, people of unusual character and grade of intelligence who have more than a passing interest in the healing art. In Detroit, particularly, will there be an opportunity to work out welfare surgery and the problems of occupational diseases. The great manufacturer, Henry Ford, who has organized so perfectly a great industry, does not forget an important link in the chain of providing for the care of his injured men. Even the slightest scratch goes directly to the hospital where trained surgeons are waiting to render the best and most modern surgery. A chief surgeon and ten assistants are provided for continuous service. The Ford hospital is most ideal. The Harper Hospital is working out plans in the same direction, and we may well look to these hospitals and to the city of Detroit for helpfulness in perfecting a plan of industrial surgery.

Among the delightful incidents at the general meeting was the address of Governor Ferry who expressed so emphatically his appreciation of the services of medical science. The House of Delegates did their work well; the officers elected were men of high character. The election of Dr.

C. H. Mayo, President-Elect, met the hearty approval of all the Fellows. Dr. Mayo was clearly the choice of the Association from the first. A new officer was elected for the first time; a Chairman of the House. It has been apparent for a long time that men of Presidential size were not always good parliamentarians. To the office of Chairman, Dr. Works of Colorado was elected.

The excursion to Ann Arbor was one of particular interest. Through the influence of the University, provisions were made for the accommodation of a large number of guests, people who are chiefly interested in earlier student days, and there was also a considerable number of people, not graduates of the University, but interested in the institution as an exponent of higher ideals in education.

Scientific clinics were held in various buildings for the purpose of bringing out the original work they are undertaking at Ann Arbor. Many old students could be seen wandering about the grounds and about the little city to discover, if possible, the place where they lived or where other students lived. We venture to say that some of the older students would have difficulty in finding the house which they occupied or where they lived during their college days. We had the good fortune of finding the house that we occupied fifty years ago. The exterior of the house had not changed much, but the city had grown beyond, so that instead of 755 being the last house on East University Avenue, there are many blocks of houses beyond that.

The number of guests that sat down at the table in the gymnasium was about 700.

We were particularly interested in visiting the hospitals, the University Hospital and St. Joseph's Hospital. Our interest in St. Joseph's Hospital grew out of the fact that it is a branch of St. Joseph's Hospital, Dubuque, and under the supervision of the Reverend Mother at Dubuque. At one time Sister Mary Lewis and Sister Ursula were connected with Mercy Hospital in Clinton, as superintendent of nurses, and at the present time Sister Mary Lewis is Sister Superior and Sister Ursula is superintendent of nurses at the Ann Arbor institution.

It will be interesting to those doing work in Catholic hospitals in Iowa, to know that the Ann Arbor institution is equipped for all kinds of high grade professional work, including pathological laboratories, X-ray laboratories, etc. The University Hospital is very much like our own University Hospital, and like institutions of that kind generally, and is conducted on practically the same plan of the Iowa University Hospital. Pri-

marily it is used as a hospital for student clinics, but members of the faculty are not barred from treating private patients in the state hospital under certain conditions providing there is room for private patients.

We recall the fact that fifty years ago there were 525 students in the medical class of the University of Michigan, all sitting and listening to the same lecture. We recall Moses Gunn with his magnificent physique, his long curly hair and burnside whiskers, and forceful way of lecturing. We also recalled Professor Palmer who had very much the appearance of an elderly Presbyterian minister of the old school who came into the lecture room with his manuscript, which he spread out on the desk, and delivered his lectures in very much the same way that a clergyman does his sermon. There was Professor Segar, a man of much learning, but with a hesitating tongue, and there were many students that preferred a ball game to listening to the Professor on Obstetrics; and we recalled the polished Professor Armor of Detroit, Professor of Materia-Medica and Therapeutics, a man of great eloquence, and whose lectures, on opium particularly, called students from other departments to listen to the beautiful exposition of the effects of opium on the mind. Probably the most famous and most loved of all the professors, was Professor C. L. Ford, Professor of Anatomy and Physiology. No one who had the privilege of listening to Professor Ford had any excuse for not knowing anatomy and what was known of physiology at that time. Only a few lectures were devoted to the latter subject. At that time no lectures were given on special subjects. No one had thought of lectures on the eye, ear, nose and throat, or the nervous system. No student at that time ever saw a microscope except at a distance, or perhaps watching the circulation of the blood. We of the University of Michigan felt that we were specially favored by having the opportunity of studying chemistry at the laboratory table. Then every graduate was required to have six weeks practical laboratory work. A full faculty for 525 students was eight professors, no special professors, or lecturers, just eight members of the faculty.

CANCER DISCUSSION BEFORE THE DES MOINES PATHOLOGICAL SOCIETY

At the May 1st meeting of the Des Moines Pathological Society, Dr. H. R. Gaylord of Buffalo, N. Y., delivered an address "The Problem of Cancer." In addition to active members, a considerable number of invited guests were present to listen to special features of this problem,

which is now exciting more public interest than any other medical subject. The subject is so large and has so many points of interest and apparently so many contradictions that it is quite impossible to state just what is known of cancer today. Dr. Gaylord discussed in particular two points while not proven, present a basis for thorough observation and experimentation. The first line of thought which Dr. Gaylord presented was that cancer cannot be profitably studied as an entity unconnected with the tissue or organ in which it is found, but as a disease of a particular organ or tissue; should be considered as a disease of the uterus or a disease of the breast and so on and not cancer of the breast, uterus or stomach, only as an incident. So far experimental evidence seems to show that there is some local condition in an organ favoring the development of a disease which presents a particular history that has so many things in common with a similar disease of some other organ, that we have come to group them together as a common disease of one or of another organ and used the term cancerous disease. If then, we study cancer of the uterus as one disease and cancer of the stomach as another disease, we are well on the way to a sound clinical knowledge. But why such a disease occurs in an organ or tissue we do not know, we can only assume certain conditions of cell growth.

Dr. Gaylord passed on to the consideration of certain other suggestive facts. It has been shown that certain conditions in the spleen have a very decided influence on cancer growth. In fact a normal active spleen has a decided immunizing influence as relates to cancer which is considerably increased by stimulation; for example, when X-ray stimulus is applied to any part of the body there is a considerably increased lymphocyte activity, and not a few cancers have disappeared under this influence. In this same connection it is found that after a certain number of X-ray applications, the lymphocytes are reduced below the normal, and rapid increase of cancer growth occur. The reduction of lymphocytes following an increase from X-ray stimulation shows an exhaustion of spleen and lymphatic activity and a loss of immunizative influence. It therefore follows that in the treatment of cancer by X-ray, it is of the utmost importance to stop the treatment before the lymphocyte activity of the spleen has become materially lessened. It is well known that cancer most frequently occurs at the decline of functional activity, at the time of life when the spleen-lymphatic system is low in lymphocyte activity and therefore the immunity of certain forms of cell growth is in a measure lost. If now a single or two or three X-ray applications are

made, an immunization may be temporarily induced that will cause the growth to disappear, not that the X-ray directly affects the growth—as the X-ray may be applied at a distant part of the body with the same effect—but directly through the increased lymphocyte activity influenced by the spleen. Two very significant facts come to our mind here, which are of much significance according to Gaylord: Cancers occur in the decline of life and more frequently attack organs of high physiological activity soon after the close of the functioning period. It is also true that after forty-five or fifty years of age the spleen activity diminishes; the coincidence of these two and the disappearance or retardation of cancer growth on artificial stimulation of the spleen and the opposite if the spleen is exhausted by overstimulation, is of sufficient significance to fix our attention on the spleen-lymphatic system. The above is in direct accordance with thoughts presented by scientific clinical observers, that the spleen is not the indifferent organ at first believed, after numerous splenectomies with no apparent loss to the individual.

DR. ALBERT; ACCURACY OF LABORATORY REPORTS

In a paper recently published in the *Journal of the Iowa State Medical Society*, Dr. Frank J. Hall, of Kansas City, called attention to the errors liable to occur in clinical laboratory reports, arising from two principle causes: first, the securing and transportation of specimens; and second, faulty or careless technic in the laboratory. In the discussion, the per cent. of error was said to be not far from 50 per cent. Professor Albert takes exception to these statements, and holds that the error is not more than five per cent., and under ordinary conditions not more than one per cent., and that this per cent. is rather due to accident than to faulty methods either in collecting specimens or in laboratory care and technic. Dr. Albert is of the opinion that if the per cent. of error was as great as alleged, physicians would hesitate to send specimens to the laboratory for bacteriological diagnosis, a position well taken.

It is recognized that the practitioner is anxious to avail himself of every means of securing an absolutely correct diagnosis, and this feeling is shared by the general public, and it is for this reason that money has been appropriated. It would be most unfortunate if no better results were obtained than was indicated in the discussion following the reading of Dr. Hall's paper. The opinion expressed by Dr. Hall was to the ef-

fect that the per cent. of error was very large, due in large measure to the failure to employ proper means to secure the specimen; that the swab method should be abandoned and laboratories should be established in all populous communities to enable the laboratory worker to secure his own specimens as far as possible. Prof. Albert maintains that the swab method of securing specimens is unquestionably reliable, and offers in support of this, the practically universal use by physicians. Prof. Albert complains that the editorial review of the paper, and the discussion, tends to throw suspicion on laboratory diagnosis in general, and that the observations tend to discredit the "directions sent out by our laboratory-method which has been shown to be the most satisfactory one yet devised considering the reliability of the results obtained and the safety of the patient."

We are much pleased to obtain Dr. Albert's views on the subject under discussion. Personally we have had very little experience with the laboratory diagnosis of diphtheria. We were somewhat surprised to learn that the element of error was as large as stated at this meeting of the Des Moines Pathological Society, but we felt that the subject was of so much importance that the views expressed should be set forth in the *Journal*. It gives us great pleasure, therefore, to have Dr. Albert, who is head of the bacteriological laboratory at the State University, correct an impression which has been more or less spread over the state. We have very great respect for laboratory investigation, but the accuracy should be beyond suspicion.

REDUCED FEES FOR LIFE INSURANCE EXAMINATIONS

The medical profession in Indiana is considerably exercised over a proposed reduction in the examination fees, by the Equitable Life Assurance Company of New York. It appears that one Dr. F. W. Foxworthy of Indianapolis, a representative of the Equitable, has been sent out as a representative of that company, for the purpose of checking up the efficiency and equipment of their medical examiners, and at the same time give notice of a reduction of examination fee from \$5.00 to \$3.00. We learn from the *Journal of the Indiana State Medical Association* that for this loyal service to the Equitable, Dr. Foxworthy is to receive a material increase in salary. The *Journal* points out in very forceful language, the fact that the insurance companies are dependent upon the medical profession for their existence, for how could a life insurance com-

pany continue in business if it were not for the careful and safe examination by its doctors. Everybody will agree that life insurance is one of the most important influences in our social life; that life insurance companies have saved many families from great misfortune. We all agree to this, and we all recognize the great benefits that life insurance companies have conferred upon the general public, but at the same time, these insurance companies have been organized for profit. They pay generous salaries to efficient men, but this is no reason why the medical profession, which as we have already said, makes the conduct of life insurance companies safe, why they should be asked to contribute of their time and services for a consideration less than agents receive. The reason for any reduction on the part of insurance companies lies in the fact that so many of the medical profession are willing to accept any kind of compensation and any kind of treatment, and as life insurance is a business for profit, so should the fees of medical men be considered as elements of profit.

In the matter of Workmen's Compensation, the proposition is different. The state contemplates a great benefit to a class of people who never receive compensation large enough to more than furnish them with moderate living, and if workmen are injured or their families become sick, and the expenses thereby increased, and if we add to this the inability of the bread winner of the family on account of injury or sickness being unable to continue to earn money, the family is reduced to hardship and medical men deprived of compensation, unless some kind of provision is made for this class. The medical profession is quite willing to contribute materially to the success of the welfare movement in the direction of rendering certain benefits to the working classes, to furnish their services for less than the ordinary scheduled rates, but there is a vast difference between life insurance companies and

Workmen's Compensation acts. It is true that certain companies carry the risk of Workmen's Compensation for a decided commercial profit, and thus interfere in a measure with the real purposes of legislation. This will continue until the state itself administers the insurance. With this distinction between the reduced fees for services to injured or sick workmen, we come to the point where our duty becomes very plain to resist the demands of insurance companies for cheaper examination.

We have not learned of any of the other old line insurance companies making a proposition to lessen the examination fee. Let us then be liberal in our relations to Workmen's Compensation, but

at the same time hold firmly to reasonable compensation for purely commercial insurance.

FINANCE AND THE PROFESSION

An interesting editorial appears in the Texas State Journal of Medicine under this title. It is generally admitted that physicians are as a rule deficient in financial affairs. This, we are free to admit, and believe there is a good reason for it. In the United States the measure of success has been generally the amount of money which has been accumulated. We are very prone to say with our mouths, that men who have acquired great fortunes have generally done so by rather questionable means, that it has been through combinations which restrained free competition in natural products of the country, or by speculative undertakings, which have frequently worked great hardships to others; but as a matter of fact we are inwardly filled with great admiration for the man who has accumulated a vast fortune within the limits of the law, even if other equally deserving persons have been crushed in the process, so that our condemning of great wealth has been rather hypocritical than real, and we have often been watching for opportunities to do what the capitalist has done, and so we have come to measure all things by the standard of the dollar. That appears to be a national trait. It has grown up since the United States became an independent country, and the feeling seems to be growing with intensity, and today when we are confronted by war, that may very seriously change the course of events, we are hesitating and trusting to look for the accumulation of dollars rather than for an increase of national welfare. There is unfortunately a body of men called doctors who are willing to admit that they have but small knowledge of the great secrets of finance, and that their hope of future salvation lies in accomplishing the maximum of public good with a minimum of personal gain in money. The late Dr. Favill was a type of this class of man.

The Texas State Journal of Medicine says:

The professional man, in order to attain eminence in his profession, must devote himself almost exclusively to the study of his profession, and his mind is constantly concentrated on subjects as far removed from financial matters and selfish consideration as it is possible to remove them. His prime purpose is to add something to the sum total of human knowledge, and contribute thereby to the welfare of the world. He develops no inclination to participate in commercial enterprises, and if he is successful in his vocation, he has not time for the consideration of such matters. Hence, it is not at

all strange that the professional man, and particularly the physician, is a poor business man.

It is not strange, in view of the small rewards which medical men gather from welfare service, that a feeling of neglect should grow up in the face of what is seen among lawyers who derive large incomes from the service of great corporations which seek to discover by legal methods how the interests of such corporations may be furthered, and how far they may go and escape the penalties of the law. The medical man himself, is often inclined to indulge in a feeling of inferiority because of this difference in appreciation of the services of the law practitioner and the services of the medical practitioner, but as a matter of fact, the members of the medical profession can congratulate themselves, and indeed feel a sense of superiority when they contemplate the fact that many successful commercial enterprises have been almost absolutely dependent on the discoveries of medical science. The helplessness of many enterprises are plainly discernible when we consider the conditions existing before the discovery of the cause of typhoid fever and malaria and yellow fever in Cuba and Panama, and in fact all the tropical countries. There would have been no Panama Canal, and our cities would be constantly exposed to the invasion of epidemic diseases of the most serious and dangerous character had it not been for the discoveries of medical science that certain elements contained in rice produces the disease known as "beriberi;" that the exclusive diet of corn produces pellagra; and that bubonic plague was caused by fleas; and that sleeping sickness was caused by the tsetse fly; that rich producing tropical countries would be almost a barren waste notwithstanding their great productive powers, had it not been for the discoveries of medical science in the way of destroying the cause of these diseases and opening up all this vast fertile tropical zone to settlement and production.

The waste of human life from typhoid fever and from various infectious diseases, has been overcome. The suffering and death which must attend wars and which must have been incidental to industrial life from accidents and from surgical procedures, have been overcome by the discovery of antiseptics and anesthetics; only a bare consideration of the vastness of the benefits that have come to the human race from medical discoveries, should create in the contemplative medical mind, a degree of satisfaction which should lift him entirely above the smallness of commercial gain, and should cause him to feel that the selfish advantages which have been brought about by the skill of the legal profession, was small in

comparison to the gains to commerce. If the medical profession could have a proper appreciation of their real value, there would be a deep laid feeling of the true aristocracy to which the medical profession can lay claim.

QUIET HIP DISEASE

Under the above title, Drs. H. L. Taylor and Wm. Frieder of New York, in the *Journal Surgery Gynecology and Obstetrics* for February, 1916, describe a series of cases of much interest, and if these observations are borne out by additional experience, will explain many cases of alleged cured tuberculous hips or coxa vara. While this disease is not new, and has been known under other names, as osteochondritis of the hip or Perthes disease, its pathology is not definite, but may be distinguished as a distinct morbid entity. The disease appears in children generally in good condition, and is as a rule first noticed as a lameness: the child is seen to limp, and after some time the leg is found to be shorter than the unaffected leg, sometimes there is pain in the hip, knee or thigh, but is not a constant symptom. Recovery occurs without special treatment in from one to three years, although Dr. Taylor recommends a spika fixation dressing. Many of these cases pass without a medical consultation, nothing being observed except a slight limp and occasional complaints of pain which the parents often diagnose as "growing pains." If the case now comes under medical observation, is found to be $\frac{1}{4}$ to $\frac{1}{2}$ inch shorter, X-ray frequently shows a shorter and thickened neck or a flattening of the head of the bone.

As above stated, the pathology is uncertain but the change in the head and neck of the femur is supposed to be some error in osteogenetic development or error in bone nutrition. The disease is not serious in its results, even if not treated.

PSYCHOLOGICAL EFFECT OF WAR

The *British Medical Journal* in an editorial on the Psychological Effect of War, suggests some very serious thoughts. Have we not noticed some of these same things in our own country, or have we been so busy money getting that we have thought only of means of gaining some advantage over our competitor. We reproduce the following:

It may be true, as has been said ever since the Boer war, that romance vanished with the individual combat from the modern battlefield, but it is equally true that never in the whole history of warfare have greater demands been made upon the mental and moral resources of the combatants than in the pres-

ent war, and never, it should be added, have these demands been more nobly met. Before the war—indeed, for long before the war—there were signs at home which even those who were not by nature pessimistic were beginning to regard with misgiving-hand writings on the wall boding disaster. In practically every department of our daily life disruptive forces appeared to be gaining ground. In all groups, from the family to the state, and insidiously invading every sphere—religious, social, economic, and political—there appeared an increasing inclination to flout conventional canons and to defy legal restraints—from a mere matter of dress and deportment at one end of the scale to preparation for civil war at the other. “Social unrest” became a matter of general wonderment and head-shaking, as if a new disease had suddenly afflicted the social body, and many were not slow to relegate this unrest to such widely disparate phenomena as a greatly enhanced love for luxury and play in the masses, a falling birth-rate, an increasing ratio of insane to general population, and an apparent increase in nervous troubles of all kinds, and to lump them all together as accumulative evidences of decay in the national fibre.

Opinion as to the meaning of these portents was divided, and it was at that time impossible to say whether they were the result of disintegrating forces, evidences of a crumbling empire, or only signs of growth—a sort of karyokinesis in the body politic, the birth-pangs of a new and perhaps better order. Then came the war, and we have witnessed during these last six months the sudden settlement of differences, the fusion of opposed bodies, the bending to a common purpose of antagonistic forces, and the steady conversion of a nation devoted to peaceful arts into a nation of warriors, not at the command of any autocratic head, but from the imperious demand of a free people to suffer in a righteous cause.

MALPRACTICE SUITS

The editor of Northwest Medicine sees in a recent decision of the Supreme Court of Washington, some relief from malpractice suits, in that state, and if the principle is accepted in other jurisdictions, it will relieve many of the dangers which surround the practice of medicine among industrial workers. It appears that one Ross, an employe in a construction company, after receiving a final award from the Industrial Insurance Commission, being dissatisfied with the sum received, brought suit for \$15,000 damages against the doctor who attended him. On trial, the jury awarded the plaintiff a verdict of \$1.00, after which a new trial was granted on the grounds of newly discovered evidence. The defendant appealed from this order, and the Supreme Court rendered the decision referred to by Northwest Medicine, and copied below. It

might be stated that the defense was conducted by the Defense Fund of the State Medical Association.

Clearly the purpose of the act was to end all litigation growing out of, incident to or resulting from the primary injury and, in lieu thereof, give to the workman one recovery in the way of certain compensation and to make the charge upon the contributing industries alone. That purpose is made reasonably clear by reference to the act.

As a further confirmation of the theory that the legislature intended to remove the matter of injuries to workmen “in all its phases” from the law courts, it will be noticed (Sec. 5 h and Sec. 120) that the legislature was careful to provide that the compensation allowed may be readjusted, if aggravation of disability takes place or be discovered after the rate of compensation shall have been established and if circumstances so warrant may be increased or rearranged.

Surgical treatment is an incident to every case of injury or accident and is covered as a part of the subject treated. By the law the commission is given authority (Sec. 24, 4) to “supervise the medical and surgical and hospital treatment to the extent that the same may be in all cases suitable and wholesome.” When a workman is hurt and removed to a hospital or is put under the care of a surgeon, he is still, within every intendment of the law, in the course of his employment and a charge upon the industry and so continues as long as his disability continues.

The law is grounded upon the theory of insurance against the consequence of accidents. The question is not whether an injured workman can recover against any particular person, but rather is his condition so directly or proximately attributable to his employment as to invoke the benevolent design of the state.

In construing statutes courts have always looked to possible consequences as an efficient aid in clearing doubts. It surely was not the intention of the legislature to leave it to the commission to apportion the compensation allowed by the state with some fancied judgment that might be rendered in a potential suit brought against the attending physician, or to encourage a settlement for a lesser sum than the amount really due by holding out the hope or suggestion that the claimant had a cause of action against a surgeon.

CONCENTRATED SOLUTIONS OF QUININE AND UREA IN HYPERTHYROIDISM

The method is recommended only to relieve hyperthyroidism and not to remove the goitre. It is sometimes true that in small toxic and atoxic goitre the inflammatory reaction following the injection is sufficient to cause the disappearance of the tumor; but the process is slow, and when the injection is used for this purpose alone, the results are liable to be disappointing.

THE BACKWARDNESS OF UNITED STATES OR CUBA, WHICH?

The City of Havana is reported to be one of the cleanest and most hygienic cities in the world, thanks to the efforts of the medical and surgical department of the United States Army and Navy which occupied Cuba during the Spanish-American war, and not only cleaned up Havana but taught succeeding health officers how to establish and maintain sanitary conditions which many an American city might envy. Property holders are required to keep their property not only clean but presentable and attractive. A number of miniature laboratories on wheels are driven about the city in search of offenders of the pure food laws. The Havana health officers pride themselves on a successful campaign for pure milk. Sixty inspectors, all medical men, young, ambitious and capable, are constantly at work and have authority to make arrests and take samples of any vendors' food or milk supplies for the purpose of examination. The examination is made immediately, in the presence of the salesman. If the result of the examination shows fracture of the city's pure food regulations, the offender immediately is taken into custody, fined, and his supply confiscated. If the offense occurs again, the fine is increased largely, and perhaps a prison sentence added. If the offense occurs the third time the offender's license to sell food is taken away from him, and in addition a prison sentence is added and his supplies are confiscated. As might be expected, various attempts have been made to evade the food laws, but punishment has been so swift and severe that now it is rare to find any violators of the law, though the inspectors are as vigilant as ever.

The practice of medicine in Cuba is on a co-operative system, and founded largely on the principle of disease prevention. Physicians are paid to keep the people well, and the net income of the medical profession decreases in inverse ratio to the prevalence of disease. A few large societies employ the best available medical talent to care for its members, and for the sum of \$18 a year every member of the largest society is entitled to all medical and surgical attention which he may require throughout the entire succeeding year. It is the function and duty of the physicians of this Society to give attention to health, hygiene and sanitation, and in every way advise people how to keep well. These societies own modern hospitals, thoroughly equipped for the latest and most approved methods of caring for the sick, and the government is now constructing a city hospital for Havana at a cost of approximately two million dollars. The University of Havana is also building a new and thoroughly modern hospital.

One thing that has been found absolutely necessary in order to protect the health of the citizens of Havana is to give the health authorities executive as well as advisory powers. In no other way is it possible to reach the highest stage of efficiency in

enforcing sanitary and public health rules. Aside from the comfort and pleasure derived, the people of Havana have discovered that it is to their economic advantage to have improved sanitary and public health conditions. Morbidity and mortality means a money loss which should be taken into consideration in estimating the value of regulations which have to do with sanitation and public health, and it is regretted that so many of our American towns and cities fail to appreciate this fact.—(The Journal of the Indiana State Medical Association.)

THE TRUDEAU SCHOOL OF TUBERCULOSIS

The Trudeau School of Tuberculosis, the first school in the world for the education of tuberculosis specialists, will be opened at Trudeau Sanitarium, Saranac Lake, N. Y., next May. Plans for this course were made by the Dr. Edward Livingston Trudeau, and the course of study will be essentially post-graduate work for practicing physicians, research workers, and advanced students interested in the cure and prevention of tuberculosis by the fresh air treatment. Special attention will be given to clinical and laboratory diagnosis, the use of the Röntgen ray, and management of institutions. The lecturers are some of the most prominent in the country, among which may be named Prof. W. H. Welch, Johns Hopkins University; Dr. Theobald Smith, director Rockefeller Institute, Princeton; H. M. Biggs, state commissioner of health of New York; Dr. E. P. Joslin, assistant professor of medicine, Harvard University; Dr. V. Y. Bowditch, medical director, Sharon Sanitarium; Dr. H. R. M. Landis, director, Henry Phipps Institute; Dr. James Alexander Miller, chief of tuberculosis clinic, New York City; Dr. R. H. Bishop, secretary of Anti-Tuberculosis League of Cleveland, Dr. H. Gideon Wells, professor of pathology, University of Illinois. The first session will be held from May 17 to June 28.—(The Journal of the Indiana State Medical Association.)

TRAUMATIC CANCER

Another interesting cancer case has been on trial, and on October 19, in the New York Supreme Court, a jury rendered a verdict of \$7,000 damages. The suit was brought by a child's nurse against the 13-year old son of an architect of New York City, on the ground that in 1910, when he was ten years old, he had struck her in the breast, and, in consequence of the blow, cancer, necessitating a serious operation, had resulted. A curious feature of the judgment is that it does not involve the parents of the boy, but only himself; and as he is not personally possessed of any property, it cannot now be enforced. It is stated, however, that if while still a minor he should inherit or otherwise come into the possession of property, the \$7,000 could be collected; while if he has nothing till he begins to earn a living, what he earns can then be attached.

TREATMENT OF ACIDOSIS

Howland and Marriott (Bulletin Johns Hopkins Hospital, March) state that the alkalies may be given by mouth, by rectum, subcutaneously, or intravenously. Vomiting and diarrhea frequently render their administration by mouth or by rectum out of the question, so one of the other methods must be employed. Intravenous administration is the method of choice, especially when rapidity of action is desired, and with acidosis it is always desired. A four per cent. solution of sodium bicarbonate is employed for intravenous use, a two per cent. for subcutaneous. The quantity to be injected depends upon the weight of the patient, the severity of the symptoms, and the effect produced, but is always large. It must be given until the urine is alkaline. Even in infants under one year as much as ten grams in twenty-four hours may be required.

THE LANCET-CLINIC FOR HONEST THERAPEUTICS

The Lancet-Clinic, Cincinnati, is one of the old standbys among the medical journals of this country. There was a time when its influence was as great as that of any other journal, for while it did not pretend to be a national institution, to all intents and purposes it was; in any event, it had a clientele in the great Mississippi Valley—which from one point of view extends from the Alleghanies to the Rockies—that was large in numbers and progressive in its ideals. In the middle of the front page of the issue for April 1 (this is no April fool joke), the following announcement is made in display type:

"With this issue the editorship of the Lancet-Clinic has passed into the hands of Dr. Martin H. Fischer. The advertising pages conform to the rules of the Council on Pharmacy of the American Medical Association."

In an editorial note in the same issue, referring to the determination of the New York Evening Telegram to decline the publication of certain advertisements, the Lancet-Clinic says:

"The columns of the medical man's favorite scientific journals should likewise be cleansed of the near-quack advertisements that disgrace them. When, the lady press discovers it necessary to decline objectionable advertising through force of public opinion, the physicians should find it comparatively easy to make the publishers of medical journals realize that the best way to retain their subscriptions is by purging their journals of everything objectionable in the advertising line.

"A glance through the advertising pages—and of course they have been reduced tremendously—will show that the advertisements of nostrums that were familiar to the readers of the Lancet-Clinic for so many years are absent. We welcome the Lancet-Clinic to the steadily increasing number of medical journals which prefer to make financial sacrifices rather than support and encourage the use of fraudulent nostrums. But the members of the medical pro-

fession in Cincinnati and the tributary territory should realize that this action on the part of the Lancet-Clinic means a great financial sacrifice, and they should step in and help to supply the deficiency by giving it their practical support in the form of subscriptions.—Journal of the American Medical Association.

SOMETHING FOR TEMPERANCE PEOPLE

There are numerous good people who would be scandalized if invited to take a high-ball or a cocktail or a glass of beer or ale, but get a great comfort from a dose of some popular patent medicine which is said to be good for drooping spirits. As an aid to a proper selection we are offering a list taken from government statistics.

| | Per Cent of Alcohol |
|---|------------------------|
| American lager beer..... | 3.8 |
| English ale and porter..... | 5. |
| French claret | 8. |
| Rhine wine | 8.7 |
| Champagne | 10. |
| Sherry | 17.5 |
| Electric Brand Bitters..... | 18. |
| Peruna | 18. |
| Lydia Pinkham's Vegetable Compound..... | 18. |
| Paine's Celery Compound..... | 19.9 |
| Wine of Cardui..... | 20. |
| Gin | 30. |
| Whisky (American Common)..... | 35. |
| Scotch Whisky | 40. |
| Hall's Great Discovery..... | 43. |
| Brandy | 47. |
| Rum | 60. |
| Hamlin's Wizard Oil..... | 65. |

THE HOSPITAL QUESTION

To be equipped with the most efficient means of study, to combat and to conquer disease, is for the practicing doctor to be best fitted to survive in the struggle for existence. The modern hospital is one of such means, providing as it does conveniences and facilities for the performance of medical duties unobtainable elsewhere, yet indispensable to their best performance. No doctor is equipped with such conveniences and facilities through private ownership; through the grant of special privilege, however, a few are thus equipped. These few, therefore, have such an advantage over all the rest of the doctors in the struggle for existence, that it may be said that the non-possession of such means is a basic cause for the failure in life of most of them. In order that no such advantages shall exist or even be possible, it is proposed:

First—To standardize all hospitals in construction, equipment, organization, and administration along modern lines.

Second—To universalize their ownership and support—that is, to vest their ownership in the state, the people, who shall also bear the burden of their support.

Third—To equalize the opportunities for doctors to advance and perfect themselves in skill and experience and thus to earn wholesome, happy livings, by extending the use of these means and facilities to all duly licensed practitioners.

The present charitable basis of the modern hospital works more harm than good by fostering abuse and law-breaking and throwing upon the medical profession an unduly burdensome portion of the existing widespread poverty. For the eradication of these latter evils, it is proposed further:

Fourth—To democratize the hospitals by replacing the charitable basis of the modern hospital by a sound and just economic basis whereby all the sick best served in hospitals shall be so served irrespective of the question of charity and shall contribute to the cost of their care and maintenance in accordance with their financial ability, and under which those who render medical services to them shall be adequately compensated.—(The Medical Economist.)

NITROUS OXIDE-OXYGEN ANESTHESIA

No doubt can be felt after these letters that the conclusion of Dr. Arthur Dean Bevan as expressed in the *Journal A. M. A.* October 23, 1915, is correct, "Nitrous oxide in the hands of the tyro is a most dangerous anesthetic." Dr. Oschner writes he used the combination in one hundred cases and then gave it up, as he considers the advantages simply in the way of advertising, that the effects are psychical. In common with nearly all the surgeons from whom reports are had he considers ether by the open method the ideal safe anesthetic.

Dr. Charles H. Mayo writes he concludes nitrous oxide in general hands more dangerous than chloroform when it was given up at the Rochester clinic. Dr. Baldwin writes that he has notes of fifteen deaths from this combination in Columbus alone, and a number of others are said to have occurred in Cleveland, Cincinnati, Baltimore and Nashville and here in Kansas City. If these reports are the facts and if there exists as Dr. Baldwin says "a conspiracy of silence among anesthetists to cover up their nitrous oxide deaths" because the popularity of the method in hands of some of the best operators with highly trained anesthetists has caused the method to be attempted by those without training and disaster has followed, it is fortunate that Dr. Baldwin has set out in his investigation and the results should be given the widest professional publicity in the interests of both patient and operator.

Dr. A. R. Warner, of Lakeside Hospital, Cleveland, believes the mortality is due not so much to method as to the impurities in the gas, and they hope to make it safer by a process of purification which he has devised for the removal of halogen acids.

It would seem that the question to be determined is not what results a brilliant surgeon like Dr. Geo. W. Crile reports nor whether Dr. J. Clarence Webster, a distinguished obstetrician with the best trained anesthetists has any mortality. What is the

death rate from the average clinic or in the practice of the physician who is handicapped doing his work without the refinement of equipment of the great hospitals? If death occur with such startling frequency as has been claimed no further discussion is necessary.—(The *Journal of the Kansas Medical Society.*)

THE EDUCATION OF THE NURSE

A very superficial survey of schools of nursing presents them, even after nearly fifty years of existence, as singularly at variance with accepted systems of education in either cultural or vocational fields. The very methods that are responsible for the breaking down of the apprenticeship system are to be found today in these schools. Excessive hours of practice and meager hours of theory still obtain. A repetition of procedures far beyond the amount required to insure tactile skill and technical efficiency is the rule—not the exception. The disposition to lengthen a service for the pupil who adopts herself readily, and to curtail a service, no matter how valuable the experience, if the pupil does not immediately adjust herself to the problems of a new branch or department of work, is universal. To the tendency to sacrifice the capable apprentice to the needs of the individual shop has again and again been attributed the decrease in efficient workmen in the trades under the apprenticeship system. A comparison of the practical experience of any group of nurse students would show a great variability—a variability not due to the inevitable fluctuations of the hospital service alone, but to the fact that the student's experience is a matter of hospital expediency rather than the required education.—(The *Modern Hospital*, March, 1916.)

WORKMEN'S COMPENSATION IN MASSACHUSETTS

The second annual report of the Industrial Accident Board of Massachusetts present the results of a study of over 96,000 non-fatal injuries and over 500 fatal injuries reported during the year ending June 30, 1914. Eighty-seven per cent. of the non-fatal cases were insured, while 72.8 per cent. of the fatal cases came within the provision of the act.

The social loss from physical disability is manifested by the aggregate loss of 190,795 weeks representing a total wage loss of \$3,172,440. Eliminating those persons whose incapacity did not extend over twenty-four hours, the per capita number of days lost was 24.26. Without any system of compensation this entire wage loss would have been borne by the employes, while the industrial efficiency of the employers would have been decreased through the greater incapacity of workmen as a result of a lack of prompt and adequate medical service. Inasmuch as medical service only is provided for the first two weeks 42,798 employes had the advantages of such attendance. The total compensation paid all injured employes and dependents of all fatally injured employes directly amounted to

\$882,162. The expenditures covering medical and hospital services and medicines totaled \$446,171. In addition to these two items, liabilities were incurred for services rendered but still unpaid and for compensations representing deferred payments for losses incurred amounting to \$1,283,419.

The dependents of those employes who met with fatal injury secured protection by financial compensation amounting to \$69,577, while the deferred payments will bring the total of estimated liability for fatal cases to \$578,705. These large sums of money were secured by a rational compensation provision and served to protect families of employes from further disabilities consequent to deprivation of wages. The social benefits are obvious.

Of the non-fatal accidents, 32 per cent. were due to hand labor and only 25 per cent. were caused by machinery. Machinery caused 17 per cent. of the fatal accidents, while hand labor was responsible for 5 per cent. With the exception of only a small per cent., the victims of these industrial accidents, fatal or non-fatal, were male. The largest number of persons affected were in the income group between 11 and 12 dollars a week. The largest number of these fatally injured were between ages of 40 and 49 years, while those of non-fatally injured 37 per cent. were in the age group 21 to 29 years.

The cost for providing compensation as far as the employers were concerned represented on the average approximately 1 per cent. of the payroll, but inasmuch as it was intended that this cost be shifted to the consumer, the cost of such insurance to the consumer of manufactured products would amount to only 18 cents per hundred dollars value. It is patent that the social distribution of this compensation liability is almost negligible, amounting as it does to \$.0018 per dollar purchase.

The experience of the Massachusetts Board during the past two years has promoted it to suggest some changes in the compensation law. Among those of particular importance is one which provides that the law be changed so as to provide for a waiting period of ten days instead of two weeks in all cases in which the incapacity does not exceed twenty-eight days. In all other cases where the period of incapacity exceeds twenty-eight days, compensation should date back to the actual day of injury. It is certainly very desirable that the maximum compensation be allotted to the injured employe, who certainly is entitled to full compensation for the entire period of disability if he is entitled to compensation for any part of it. The original intent of a waiting period was to provide against malingering, but practical experience has indicated that this is a negligible factor. Malingerers are numerous when individuals on a low income basis can scarcely afford to sacrifice their wages while the compensation returns would not total more than half of the losses thus fraudulently incurred.

The large amounts of money expended for medical and hospital service indicate that compensation acts not alone distribute the economic loss but create a more independent status for the employe and

result in more adequate medical and surgical attention, either at home or in the hospital. From the standpoint of medical economics, it is noteworthy that the physician and surgeon is actually paid for services given and his responsibility for careful attention to the victims of industrial accidents is enhanced.

There is every reason for the medical profession to stand back of and support social legislation of this character. If the appeals must be made to the pocketbooks, it cannot be gainsaid that the medical profession is a distinct gainer through the enactment of compensation acts or health insurance laws. If the appeal is made to the social conscience of the profession it is undeniable that the social and economic results to society not merely warrant the establishment of workmen's compensation acts but demand them as acts of social justice designed to protect and benefit the large industrial population forming the bulwark of society.—(Dr. Ira S. Wile, *American Journal of Surgery*, April, 1916.)

"EASY MONEY" LIBERALITY

One of the favorite themes of the defenders of quacks and "patent medicine" vendors is the liberality and public spiritedness that characterizes this class of citizens. The Samuels case referred to in the preceding announcement is in point. According to *The Journal of the American Medical Association*, the Wichita paper that told of the Appellate Court's decision had its reporter call on Samuels and apprise him of the fact. In his "story" the reporter described the room in which he was received. It was "beautifully appointed;" it was "done in mahogany;" it bore, in short, evidences of the wealth of its owner. How that wealth was obtained the reporter does not describe. Nothing is said of the widow whose husband had used the Samuels nostrum, and who, left alone with two little ones, wrote asking Samuels to take back the medicine that was left and refund some of the money. Nothing was said of another widow whose husband "kept up with" Samuels' mixture "until the last day;" she, left with three children, implored Samuels to return at least some of the money that he had received from the man now dead. Nothing was said of the case of the poor man with a wife and four children who asked for a return of the \$5 he had sent Samuels for his sugar and salt mixture with which to treat the eye of his little boy, obviously without results. Nothing was said of the hundreds, yes, thousands, of eternally hopeful sick who threw away on a worthless mixture money that in many cases represented real sacrifices. The reporter did not mention these facts, but Samuels, being a "substantial citizen" of Wichita, the reporter did mention that when institutions or individuals sought charity Samuels "gave with open hands and a smile." Curiously enough, this open-handed generosity seems characteristic of the nostrum faker. To civic, commercial or, more often, to religious organizations, the "patent medicine" manufacturer is always liberal.

Why shouldn't he be? His money comes "easy." For those engaged in a business that fails to command the respect of the public, there is nothing like indiscriminate charity to make the unthinking or shallow-thinking forget the deeper evils behind it. Should the Ladies' Aid Society desire a small donation what is simpler than to give it the \$5 just received from a hopeful and credulous consumptive; should the Home for the Friendless need help what is easier than to turn over a money-order just received from some poor unfortunate who believes he is going to be cured of paralysis by a mixture of salt and water; should a subscription be desired toward the erection of a new church, give liberally. What if the bricks thus furnished to represent the savings of a Bright's disease victim, a morphine habitué or a blind man, sent in the hope that cure is in reach. Generosity is an admirable trait—sometimes. The liberality of those who wring from the credulous sick a fortune through the sale of a worthless nostrum is not a form of charity that will appeal to decent men.

THE PHYSICIAN IN INDUSTRY

Medical supervision of employes is no longer a novelty; that regular inspection of workmen increases efficiency, prolongs lives and lengthens the period of industrial usefulness has become generally recognized. Many of our larger industries, employing thousands of men, have equipped establishments for routine examination of employes and for the treatment of injured workmen which equal in scope and equipment some of the best hospitals. Employers have found that the careful selection of men for individual positions to which they are physically fitted means a saving in the loss of time through illness and increased output of work during regular working hours. In a recent address, Alexander notes the various ways in which the physician may be of service to large industrial institutions. Aside from looking after the health of individual employes, he may search out the various conditions which affect adversely the health and comfort of all the workmen. He may aid in securing proper ventilation and lighting. Through lectures and individual instruction, the workmen may be informed concerning healthful habits to be employed at home and in the shop. A limited number of intelligent employes may be instructed in first-aid measures, enabling them, in time of emergencies, to be of service to other workmen. The work of the industrial physician is unique. He is confronted with situations which perhaps arise in no other field of medicine. His material consists usually of workmen, many of them recent immigrants, not acquainted with the English language, subject to the diseases of the country from which they came, and ignorant of the ordinary elements of hygiene which are familiar to the graduates of the modern American public school. Efforts are being made to standardize the work in the various industrial establishments—to bring about uniform standards of ventilation, light, sanitary requirements, etc. In the great field of prophylaxis

in which physicians have pointed the way, such work is practical and economical.—The Journal of the American Medical Association.

BOOK REVIEWS

PULMONARY TUBERCULOSIS

By Maurice Fishberg, M.D., Clinical Professor of Tuberculosis, New York University, and Bellevue Hospital Medical College; Attending Physician, Montefiore Home and Hospital for Chronic Diseases, New York. 639 Pages Illustrated With 91 Engravings and 18 Plates. Lea & Febiger, Philadelphia and New York, 1916.

The author states in the Preface; "It is the purpose of this book to supply the general practitioner with information concerning the etiology, diagnosis, prognosis, and treatment of pulmonary tuberculosis, its clinical forms and common complications."

This book is entitled to a rather extensive notice, dealing as it does with one of the most important diseases the profession has to contend with and which can be so modified and controlled by intelligent study and co-operation.

The first chapter relates to tubercle bacilli and the poisons produced by them.

Chapters two and three consider Tuberculous Infection and the Epidemiology of Tuberculosis, and include the avenues of entrance of infection, natural barriers against infection, etc., frequency of infection, geographical distribution, influence of age, sex and mortality rates.

In chapter four it is said that tuberculosis is not a clinical entity like typhoid fever—running a certain course—but presenting a different clinician picture in adults and children. In adults, 95 per cent. affect the lungs. In children, a bacteremia affecting bones, joints and glands. Why do 90 per cent. exposed to tuberculous infection escape and 10 per cent. contract the disease? Then follows a discussion of predisposition and evolution of the disease. So far as heredity is concerned, no sufficient proof is adduced to prove the possibility of infection of the spermatozoa, but that there is a possibility of placental transmission; and so on including the various theories relating to predisposition.

Chapter five presents one of the most important discussions in the book, having largely to do with immunity. Evidence is accumulating to show that phthisis is a disease acquired during childhood, and that its appearance in adults is a late manifestation of the disease, and that a sufficient immunity is established to carry the individual along until some serious lowering of resistance occurs when the bacilli begin to proliferate; that is, the immunity created by childhood infection is sufficient to protect against exogenic infection. Therefore much that we had in mind as to adult infection, must be given up.

The greater part of the book is devoted to a study of the pathology, pathological anatomy of the dis-

ease, and to the diagnosis and treatment. We are told that the first lesion cannot be definitely determined by autopsy in old cases, whether it has arisen from hematogenous or aerobic route, but that the initial lesion heals in the vast majority of cases.

The difficulties of diagnosis in incipient tuberculosis are pointed out, and the sources of error are emphasized. The author does not believe the proportion of diagnostic errors is greater than in other diseases, but that to reach a reasonably safe diagnosis, a careful study of approved tests are necessary. Until local lesions have developed, diagnosis may be in doubt. The value of the various tests are fully presented. The author states that "in a large proportion of cases phthisis does not pass the stage of incipency;" the fever, cough, expectoration, etc., if not neglected, leads to a few months rest in the country or in a sanatorium brings about a cure.

Several chapters are given to the management of phthisis, which we would gladly discuss in detail if space permitted. We can only hope that practitioners of general medicine will carefully read this most excellent book.

OBSTETRICS

By Edwin Cragin, A.B., A.M., M.D., F.A.C.S., Professor of Obstetrics and Gynecology, College of Physicians and Surgeons of Columbia University, New York; assisted by George H. Ryder, A.B., M.D., Instructor in Gynecology, College of Physicians and Surgeons, Columbia University. Published by Lea & Febiger, Philadelphia and New York.

Dr. Cragin prefaces his work by the statement that his eighteen years' service as head of Sloane Hospital for Women, has furnished the contents of this volume, an expression of the results of the methods there employed, and presenting American statistics in obstetrics.

No one text-book of the present day on Obstetrics, can or does give an inflexible rule for the guidance of student or practicing physician, because much must be left to the individual judgment in certain cases. The works of Hirst, Edgar, DeLee and of Cragin, all present varying ideas and methods, derived by each from his experience, with the result that the doctor wishing to bring to his patients the best work possible, should possess and digest not one text-book, but several.

The usual chapters on Anatomy and Embryology, precede the division of the volume into Physiological Pregnancy, Pathological Pregnancy, Pathological Labor, Obstetric Surgery and Pathological Puerperium. The plates and letter-press, no less than the scientific contents of this book, merit comment on account of their excellence.

HYGIENE AND SANITATION

By Seneca Egbert, A.M., M.D., Professor of Hygiene and Dean of the Medico-Chirurgical College of Philadelphia. Sixth Edi-

tion. Published by Lea & Febiger, Philadelphia and New York.

The increasing interest of the general public in matters pertaining to public health and to public welfare, as evidenced by the activities of civic organizations throughout the country, demands of the profession of medicine a more thorough and detailed knowledge along these lines than has perhaps been possessed previously by the general practitioner. For those willing to avail themselves of authoritative information on these subjects, the work of Dr. Egbert can be recommended as presenting the facts in a succinct and handy form—a well prepared digest of present day knowledge in this important phase of the physician's duty. The fundamental principles are clearly set forth, and new ideas and discoveries are treated in a conservative manner, that they be tested and tried before being laid down as authoritative.

The work takes up as general topics, Bacteriology, Air, Ventilation and Heating, Water and Food, followed by chapters on Personal and School Hygiene, Disinfection and Quarantine, and Sewage, its Removal and Disposal, Industrial Hygiene and Occupational Diseases, Military Hygiene and Vital Statistics are briefly treated, the work closing with a chapter giving the methods of examination of air, water, and food.

STUDIES IN ETHICS FOR NURSES

By Charlotte A. Aikens. Author of Hospital Management. Primary Studies for Nurses and Clinical Studies for Nurses, etc. 12 mo. of 320 Pages. W. B. Saunders Company. Philadelphia and London, 1916. Cloth, \$1.75 Net.

It has been the privilege of the writer to know Miss Aiken in her hospital work, and believe that no one is better qualified to write such a book, a book that should be in the hands of every pupil nurse. Very many just criticisms can be laid at the door of hospitals training nurses, which could easily be turned aside if principles laid down in this book could be instilled in the minds of nurses in training. This book is not intended to instruct young women in the technical work of nurses, but rather as to lines of conduct. It is not limited to the student nurse but goes beyond, to after graduation. We cannot say what proportion of nurses, otherwise well qualified, fail because not trained in proper lines of conduct for so serious and important a duty as the scientific and ethical care of the sick and injured. A nurse should have high ideals. It is probably true that the long hours of menial service and drudgery in a hospital often blunts the finer instincts of the pupil nurse, and the harsh treatment sometimes received in private homes, creates a feeling of indifference. Nevertheless, public opinion is gradually remedying these things, and nothing will do more to bring about a higher appreciation of the value of nurse service than the dignity and self respect of the nurse herself. The kindly way in which

Miss Aiken presents this subject, and the truth of her contentions, must appeal to the mind of every young woman who is fit to take up this line of work.

THE CLINICS OF JOHN B. MURPHY

The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago; Volume V, Number II (April, 1916) Octavo of 176 Pages, 32 Illustrations. W B. Saunders Company, 1916. Philadelphia and London. Price Per Year, Paper \$8.00; Cloth \$12.00.

The most valuable contribution in this number is a lecture on The Surgery of Tendons and Tendon-Sheaths. It should form the basis of a careful study by surgeons doing industrial work. So much depends on a knowledge of the anatomy and the treatment of diseases and injuries of these important structures. Working men are very liable to injuries of tendons and tendon-sheaths, and if the most timely and skillful treatment is not employed, serious disabilities may arise.

This number of Clinics is particularly valuable to surgeons in industrial service in that it presents a long series of cases and operations in which he is particularly interested. The trend of modern surgery is more and more in the direction of surgery of accidents and in restoring bread winners to a condition of highest efficiency.

NEW AND NON-OFFICIAL REMEDIES

During November the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Antiseptic Supply Co.:

Iodoapplicators.

Iodoapplicators, special.

Iodosticks.

The Bayer Company, Inc.:

Iodothyryne Tablets, 3 grs.

Theocin-Sodium-Acetate Tablets, 1½ grs.

Thyresol Pearls, 5 grs.

Merck and Co.:

Agar Agar Powder, Merck.

Agar Agar Shreds, Merck.

Berberine Hydrochloride, Merck.

Calcium Peroxide, Merck.

Ethyl Salicylate, Merck.

Fluorescein, Merck.

Formic Acid, Merck.

Mercury Cyanide, Merck.

Mercury and Potassium Iodide, Merck.

Mercury Succinimide, Merck.

Morphine Meconate, Merck.

Osmic Acid, Merck.

Sodium Oleate, Merck.

Sodium Peroxide, Merck.

Thiosinamine, Merck.

Urea, Merck.

Zinc Peroxide, Merck.

H. K. Mulford Co.:

Ampuls Emetine Hydrochloride 0.005 Gm.

Ampuls Emetine Hydrochloride 0.02 Gm.

Ampuls Emetine Hydrochloride 0.04 Gm.

Ampuls Mercury Succinimide 0.1 Gm.

Ampuls Pituitary Extract ½ Cc.

Ampuls Quinine Dihydrochloride 0.24 Gm.

Ampuls Quinine Dihydrochloride 0.5 Gm.

Ampuls Quinine and Urea Hydrochloride 1%.

Ampuls Sodium Cacodylate 0.1 Gm.

Ampuls Sodium Cacodylate 0.2 Gm.

Ampuls Sodium Cacodylate 0.5 Gm.

Ampuls Sodium Cacodylate 1 Gm.

Purified Tricresol, Mulford.

Scarlatinal Stre Pto-Serobacterin (Therapeutic).

Powers-Weightman-Rosengarten Co.:

Calcium Peroxide, P. W. R.

Magnesium Peroxide, P. W. R.

Sodium Perborate, P. W. R.

Sodium Peroxide, P. W. R.

Strontium Peroxide, P. W. R.

Zinc Peroxide, P. W. R.

Swans-Myers Co.:

Swan's Staphylococcus Bacterin (No. 37).

Swan's Streptococcus Bacterin (No. 43).

Swan's Typhoid Bacterin (No. 44) Prophylactic.

Since publication of New and Non-official Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies:"

Bismuth Tribromphenate—Basic bismuth tribromphenate. It is claimed to be a non-irritant and non-toxic antiseptic and an odorless and efficient substitute for iodoform. It is said to be of value in gastrointestinal catarrh, proctitis, dysentery, diarrheas, etc. Merck and Co., New York (Jour. A. M. A., Nov. 13, 1915, p. 1731).

Butyl-Chloral Hydrate, Merck—A non-proprietary brand of butylchloral hydrate admitted to New and Non-official Remedies. Merck and Co., New York (Jour. A. M. A., Nov. 13, 1915, p. 1731).

Ethyl Bromide, Merck—A non-proprietary brand of ethyl bromide admitted to New and Non-official Remedies. Merck and Co., New York.

Homatropine Hydrochloride, Merck—A non-proprietary brand of homatropine hydrochloride admitted to New and Non-Official Remedies. Merck and Co., New York.

Sodium Cacodylate, Merck—A non-proprietary brand of sodium cacodylate admitted to New and Non-official Remedies. Merck and Co., New York.

Iodothyryne Tablets, 3 grains—Each tablet contains iodothyryne 3 grains. The Bayer Company, Inc., New York.

Thyresol Pearls, 5 grains—Each pearl contains thyresol 5 grains. The Bayer Company, Inc., New York.

Theocin-Sodium Acetate Tablets 1½ grains—Each tablet contains theocin-sodium acetate 0.1 Gm. The Bayer Company, Inc., New York.

Ampuls Emetine Hydrochloride, Mulford 1/12 grain—Each ampule contains emetine hydrochloride 0.005 Gm. H. K. Mulford Co., Philadelphia.

Ampuls Emetine Hydrochloride, Mulford 1/3 grain—Each ampule contains emetine hydrochloride 0.02 Gm. H. K. Mulford Co., Philadelphia.

Ampuls Emetine Hydrochloride, Mulford, 2/3 grain—Each ampule contains emetine hydrochloride 0.04 Gm. H. K. Mulford Co., Philadelphia.

Ampuls Sodium Cacodylate, Mulford, 1 1/2 grains—Each ampule contains sodium cacodylate 0.1 Gm. H. K. Mulford Co., Philadelphia.

Ampuls Sodium Cacodylate, Mulford, 3 grains—Each ampule contains sodium cacodylate 0.2 Gm. H. K. Mulford Co., Philadelphia.

Ampuls Quinine and Urea Hydrochloride, 1%, Mulford—Each ampule contains 5 Cc. of a sterile 1 per cent. solution of quinine and urea hydrochloride. H. K. Mulford Co., Philadelphia.

Ampuls Mercury Succinimide, Mulford, 1/6 grain—Each ampule contains mercury succinimide 0.01 Gm. H. K. Mulford Co., Philadelphia.

Calcium Peroxide, P. W. R.—A non-proprietary preparation of calcium peroxide admitted to New and Non-official Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Magnesium Peroxide, P. W. R.—A non-proprietary preparation of magnesium peroxide admitted to New and Non-official Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Sodium Peroxide, P. W. R.—A non-proprietary preparation of sodium peroxide admitted to New and Non-official Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Strontium Peroxide, P. W. R.—A non-proprietary preparation of strontium peroxide admitted to New and Non-official Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Zinc Peroxide, P. W. R.—A non-proprietary preparation of zinc peroxide admitted to New and Non-official Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Sodium Perborate, P. W. R.—A non-proprietary preparation of sodium perborate admitted to New and Non-official Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Formic Acid, Merck—A non-proprietary preparation of formic acid admitted to New and Non-official Remedies. Merck and Co., New York.

Agar-Agar Powder, Merck—A non-proprietary preparation of agar-agar admitted to New and Non-official Remedies. Merck and Co., New York.

Agar Agar Shreds, Merck—A non-proprietary preparation of agar agar admitted to New and Non-official Remedies. Merck and Co., New York.

Berberine Hydrochloride, Merck—A non-proprietary preparation of Berberine hydrochloride admitted to New and Non-official Remedies. Merck and Co., New York.

Fluorescein, Merck—A non-proprietary preparation of fluorescein admitted to New and Non-official Remedies. Merck and Co., New York.

Mercury Cyanide, Merck—A non-proprietary

preparation of mercury cyanide admitted to New and Non-official Remedies. Merck and Co., New York.

Mercury and Potassium Iodide, Merck—A non-proprietary preparation of potassium mercuric-iodide admitted to New and Non-official Remedies. Merck and Co., New York.

Swan's Typhoid Bacterin (No. 44) (Prophylactic)—Marketed in packages of three 1 Cc. vials and also in packages of six 1 Cc. vials. Swan-Myers Company, Indianapolis, Ind. (Jour. A. M. A., Nov. 27, 1915, p. 1915).

PROPAGANDA AND REFORM

Swan's Rheumatic Bacterin (Mixed) No. 47—According to the manufacturer, The Swan-Myers Co., Indianapolis, Ind., this preparation contains pneumococci, Friedlaender's bacilli and streptococci (polyvalent). The Council on Pharmacy and Chemistry refused to admit this vaccine to New and Non-official Remedies because there is no satisfactory evidence that either the pneumococcus or Friedlaender bacillus is concerned in the etiology of acute or chronic rheumatism or rheumatoid arthritis and no conclusive evidence that the streptococcus is an etiologic factor (Jour. A. M. A., Nov. 6, 1915, p. 1662).

Elixir Iodo-Bromide of Calcium Comp—The Tilden Company, New Lebanon, N. Y. and St. Louis, Mo., sells "Elixir Iodo-Bromide of Calcium Comp. without Mercury" and "Elixir Iodo-Bromide of Calcium Comp. with Mercury." The latter is said to contain, in addition to the ingredients of the former, 1/100 gr. mercuric chloride in each fluidram. The "formula" of the elixir without mercury is stated to be: "Salts of Iodine, Bromine, Potassium, Sodium, Calcium, Magnesium with Stillingia, Sarsaparilla, Rumex, Dulcamara, Lappa, Taraxacum, Menispermum." Advertising circulars give "formulas" which differ somewhat from the proceeding. None of the "formulas" gives the quantities of all of the several constituents. The Tilden Company asks physicians to depend on these preparations in the treatment of syphilis. While it seems incredible that any physician would jeopardize the health—even the life—of a patient by accepting this advice, the fact that certain medical journals advertise these preparations with the caption "The Conquest of Syphilis" made it incumbent on the Council on Pharmacy and Chemistry to record its condemnation of the employment of these unscientific, semi-secret mixtures (Jour. A. M. A., Nov. 6, 1915, p. 1662).

The Autolysin Treatment—There were strong evidences from the beginning of a commercial spirit in the exploitation of this treatment. Letters sent to physicians further illustrate the method of promoting this unproved and possibly dangerous treatment. Dr. Richard Weil, who had the opportunity of personally witnessing the application of this compound in a long series of cases at the General Memorial Hospital, expresses the belief that auto-

lysin is useless, that it adds nothing of value to the methods now generally accepted, and that it often aggravates the sufferings and accelerates the death of the patient (Jour. A. M. A., Nov. 6, 1915, p. 1641, 1647 and 1662).

Varlex Compound—This is an alleged cure of the liquor and tobacco habit of the "prescription fake" variety. Advertisements advise the secret administration of: Water 3 ounces, muriate of ammonia 20 grains, Varlex Compound one package, pepsin 10 grains. The A. M. A. Chemical Laboratory reports that Varlex Compound consisted of approximately 97 per cent. milk sugar and 3 per cent. moisture (Jour. A. M. A., Nov. 6, 1915, p. 1663).

Alkalol—Analysis in the A. M. A. Chemical Laboratory indicated Alkalol, which is advertised as useful in inflammations of the nose and throat, to be essentially an aromatized, weakly alkaline, saline solution containing a small amount of chlorate, probably potassium chlorate; it yielded about 2 per cent. of solids, mainly alkali chlorid, chlorate and bicarbonate of this 2 per cent. about one-half was bicarbonate (Jour. A. M. A. Nov. 6, 1915, p. 1665).

Dr. Charles Flesh Food—This is an ointment sold under such claims as "Applied to the skin nourishes by absorption" and "it builds firm, healthy flesh." It is also said to be an efficient bust developer. Analysis in the A. M. A. Chemical Laboratory indicated the following: starch 38.5 per cent., petrolatum 51.0 per cent., zinc oxide 2.0 per cent., impure stearic acid 1.5 per cent., perfume, coloring matter (Jour. A. M. A., Nov. 13, 1915, p. 1747).

Intesti-Fermin—"May we count on your assistance" ingenuously inquires the Berlin Laboratory, Ltd., in an advertisement appearing in a medical journal, and with cool effrontery continues "We are telling the layman about Intesti-Fermin * * * May we count on your assistance in spreading this message to everyone * * * ?" May they? (Jour. A. M. A., Nov. 13, 1915, p. 1736).

Freckle and Beauty Lotions—The worthlessness and, in many instances, the dangerous character of nostrums sold as freckle removers and beautifying preparations are indicated by the following analysis, taken from the reports of various state chemists: Hill's Freckle Lotion was found to be a 1.84 per cent. solution of corrosive mercuric chloride. Kingsbery's Freckle Lotion was found to be a solution of corrosive mercuric chloride containing 5.3 parts in 1000. Kulux Compound, a "prescription fake" freckle and tan remover, was found to contain zinc oxide, bismuth subcarbonate, glycerine and water. Mrs. McCarrison's Famous Diamond Lotion No. 1, said to remove moths, freckles, pimples, etc., was found to be essentially a solution 28.2 parts of corrosive mercuric chloride in 1000 of water. Neroxin, a "prescription fake" said to remove blackheads, was found to contain borax 55 per cent. and "soda" 25 per cent. Othine, sold as a freckle remover, is reported to contain bismuth subnitrate and ammoniated mercury with a fatty base. Perry's Moth and Freckle Lotion Compound was found to be a 16

in 1000 solution of corrosive mercuric chloride containing in addition a small amount of a lead salt. Pyroxin, sold on the "prescription fake" plan as an eyebrow and eyelash grower, was found to be perfumed vaseline. Rose-Kayloin, advertised in fake health departments of some newspapers, was found to contain 80 per cent. sulphate and 15 per cent. potassium carbonate. Mme. Rupert's Face Bleach is reported to be a 4 in 1000 alcoholic solution of corrosive mercuric chloride, containing a small amount of benzoin. Stillman's Freckle Cream was found to be an ammoniated mercury paste. Tan-A-Zin, a complexion beautifier, was found to have for its essential ingredient ammoniated mercury. Sarah Thompson's "Wrinkle Lotion" was found to contain alum 7 per cent., glycerine 29 per cent. and water 64 per cent. Zintone, said to produce a faultless complexion quickly, is reported to contain borax 23 per cent., stearic acid and soap 77 per cent. Though the external use of mercury salts is fraught with danger, the nostrums above shown to contain such poisonous ingredients are sold with the claim that they are practically harmless (Jour. A. M. A., Nov. 20, 1915, p. 1835 and Nov. 27, 1915, p. 1933).

Anesthesin—Anesthesin is paramino-ethybenzoate. New and Non-official Remedies states that it is one of the products which owe their existence to the discovery that the local anesthetic action of cocaine is due to the radical of benzoic acid in combination with a nitrogen-containing basic group. Treasury Decision 2184 contemplates the registration of anesthesin under the Harrison narcotic law (Jour. A. M. A., Nov. 20, 1915, p. 1837).

Laxative Bromo Quinine—From the analysis of the A. M. A. Chemical Laboratory it appears that each tablet of Laxative Bromo Quinine contains, as essential ingredients, phenacetin about 2 grs., caffeine $\frac{1}{8}$ gr., quinine or cinchona alkaloids $\frac{2}{3}$ gr. and aloin or aloes. While the name gives the impression that bromide and quinine are the important ingredients, the bromide content corresponds only to 1/500 part of a pharmacopoeial dose of potassium bromide. In order to get a pharmacopoeial dose of quinine, it would be necessary to take ten laxative Bromo Quinine Tablets. If this were done, the person would get twenty grains phenacetin, a dangerously poisonous dose. As phenacetin is the essential ingredient of Laxative Bromo Quinine it is evident that this widely exploited nostrum is misbranded (Jour. A. M. A., Nov. 27, 1915, p. 1932).

Iodeol and Iodagol—Both appear to be iodine preparations. They are advertised as "Electro-Chemical Colloidal Iodine." Iodeol is recommended as "Iodine with all its potentialities * * * stripped of all its drawbacks—non-irritating, non-caustic, non-toxic, non-cumulative, injectable without pain." No adequate evidence is offered in support of the therapeutic claims made for Iodeal and Iodagol, although the assertions as to the action of Iodeal in tuberculosis and pneumonia, in particular, are susceptible of test by laboratory and animal investigation (Jour. A. M. A., Nov. 27, 1915, p. 1935).

Minutes of the Sixty-fifth Annual Session of the Iowa State Medical Society, Davenport, May 10-11-12, 1916

Wednesday, May 10—Morning

The sixty-fifth annual session of the Iowa State Medical Society convened in the Burtis Opera House, Davenport, at nine o'clock a. m., May 10, 1916.

The meeting was called to order by President W. B. Small, Waterloo, following which Very Reverend Marmaduke Hare, Davenport, gave the invocation. Addresses of welcome were given by Mr. Charles Grilk, Davenport, for the city, and Dr. G. F. Harkness, Davenport, on behalf of the profession; response was made by Dr. E. F. Clapp, Iowa City.

Dr. J. N. Warren, on behalf of the Society, then presented to the President a gavel as a token of personal esteem, and stating that it might aid him in more efficiently conducting the proceedings. The President thanked the members of the Society for the token.

Dr. J. S. Weingart, Des Moines, read a paper on "The Examination of Spinal Fluid as a Diagnostic Procedure." Discussed by Dr. G. H. Hill, Des Moines.

Dr. J. R. Allen, Waterloo, read a paper on "The Pathology of Bacterial Infection." Discussed by Drs. C. A. Boice, Washington; J. W. Cokenower, Des Moines, and J. S. Weingart, the discussion being closed by Dr. Allen.

Dr. C. E. Van Epps, Iowa City, read a paper on, "Renal Functional Tests." Paper discussed by Drs. L. W. Littig, Davenport; John F. Herrick, Ottumwa; W. B. LaForce, Ottumwa; William Jepson, Sioux City; A. G. Fleischman, Des Moines; and C. F. Wahrer, Fort Madison, Dr. Van Epps closing the discussion.

Address of the chairman of the Section on Medicine was made by Dr. G. N. Ryan, Des Moines, the subject being, "The Importance of the Attitude of the Public Towards the Medical Profession."

Wednesday, May 10—Afternoon

Meeting was called to order by the President at 1:30 o'clock.

Announcement being made that Dr. J. Frederick Clarke, Fairfield, could not be present, his paper, entitled, "The Iowa County Hospital and Surgery in the Country" was read by title and passed.

Dr. C. B. Hickenlooper, Winterset, read a paper on, "The Importance of More Thorough Examinations in Diseases of the Rectum and Colon." Discussed by Drs. Thomas F. Duhigg, Des Moines; S. A. Spilman, Ottumwa; J. W. Kime, Fort Dodge, and F. J. Conroy, East Moline, Ill.; Dr. G. N. Ryan and Dr. C. B. Hickenlooper, closing the discussion.

It was moved by Dr. G. N. Ryan that the courtesies of the floor be extended to all visiting physicians. Motion seconded. Carried.

Dr. Henry H. Clark, McGregor, then gave the "Oration on Surgery."

Dr. Edwin A. Merritt, Council Bluffs, read a paper on "The Diagnosis of Gastric and Duodenal Ulcer."

Discussed by Drs. Thos. A. Burcham, Des Moines; Bundy Allen, Iowa City; M. J. Moes, Dubuque, and Alexander Lambert, New York City; Dr. Merritt closing the discussion.

Dr. Charles J. Rowan, Iowa City, gave a talk upon the subject, "The Post-Operative Management of Surgical Cases." Discussed by Drs. D. N. Loose, Maquoketa; Murdoch Bannister, Ottumwa; J. N. Warren, Sioux City; A. G. Hejinian, Anamosa; J. L. Augustine, Ladora; L. W. Littig, Davenport; W. W. Dean, Sioux City; M. F. Moore, Martinsburg; C. F. Wahrer, Fort Madison, and C. B. Taylor, What Cheer; the essayist closing the discussion.

Dr. Frank A. Ely, Des Moines, read a paper on "Syringomyelia—With Report of a Case." No discussion.

Wednesday, May 10—Evening

The meeting was called to order by the President at eight o'clock.

Calling Vice-President John E. Luckey to preside, Dr. Small at this time read his Presidential Address.

The President then introduced the essayist of the evening, Dr. Alexander Lambert of New York City, who read a paper on "Cardiac Pain." Upon motion by Dr. D. S. Fairchild a rising vote of thanks was unanimously extended to Dr. Lambert for his very interesting discussion.

Vice-President Luckey appointed as a committee to consider and report upon the President's Address, Drs. Henry Albert, Iowa City; George E. Decker, Davenport, and V. L. Treynor, Council Bluffs.

Thursday, May 11—Morning

The meeting was called to order by Vice-President Luckey at nine o'clock.

Dr. J. H. Schrup, Dubuque, read a paper on "The Inter-Relation of Abdominal and Pelvic Pathology." Discussed by Drs. L. C. Kern, Waverly, and W. C. Newell, Ottumwa; Dr. Schrup closing the discussion.

Dr. C. A. Waterbury, Waterloo, read a paper on "Pyloric Obstruction in Infancy." Discussed by Drs. William Jepson, Sioux City; Fred Moore, Des Moines; J. T. Strawn, Des Moines; L. E. Kelly, Des Moines; A. M. Pond, Dubuque; C. H. Magee, Burlington, and Guthrie McConnell, Waterloo, Dr. Waterbury closing the discussion.

Dr. W. S. Conkling, Des Moines, read a paper on "Rupture of the Intestine due to Abdominal Trauma." Discussed by Drs. A. J. Burge, Mason City; C. H. Magee, Burlington; F. B. Dorsey, Keokuk, and W. S. Conkling in closing.

Dr. Carl Stutsman, Burlington, read a paper on "The Internal Secretory Glands." Discussed by Drs. John F. Herrick, Ottumwa; E. H. King, Muscatine; C. F. Wahrer, Fort Madison, and G. E. Crawford, Cedar Rapids; Dr. Stutsman closing the discussion.

Dr. A. M. Pond, Dubuque, then read the Address of the Chairman of the Section on Surgery, his subject being, "The Cancer Problem."

Dr. Taylor R. Jackson, Albia, read a paper on "Asthma—Its Causes, Varieties and Different Meth-

ods of Treatment." Discussed by Dr. H. C. Eschbach, Albia.

Thursday, May 11—Afternoon

The meeting was called to order by the President at 1:30 o'clock.

Dr. F. Earle Bellinger, Council Bluffs, read a paper on, "Drainage for Empyemie Conditions of the Chest—When and How Should Same be Carried Out." Discussed by Drs. C. B. Taylor, What Cheer; E. C. Junger, Soldier; S. A. Spilman, Ottumwa, and J. S. Dean, Wheatland; Dr. Bellinger closing the discussion.

Dr. John W. Shuman, Sioux City, read a paper on "Rheumatism." Discussed by Drs. Murdoch Bannister, Ottumwa; Henry Albert, Iowa City; Frank M. Fuller, Keokuk, and G. N. Ryan, Des Moines, Dr. Shuman closing the discussion.

Dr. Wayne M. Shirley, Carroll, read a paper on "A Hematoma of the Abdominal Wall Simulating an Intra-Abdominal Accident." Discussed by Drs. J. L. Augustine, Ladora; E. H. King, Muscatine; G. E. Crawford, Cedar Rapids, and the essayist in closing.

Dr. H. A. Minassian, Des Moines, read a paper on "Conservation in Gynecology." Discussed by Drs. C. E. Ruth, Des Moines; J. N. Warren, Sioux City, and Frank M. Fuller, Keokuk; Dr. Minassian closing the discussion.

Dr. Henry Albert, chairman of the committee appointed to consider and report upon the President's Address, presented report as follows:

"Your committee to whom has been referred the President's Address, submit the following report:

The scholarly and instructive address of the President points very clearly to the value of the proper kind of co-operation in improving the standard of work done by the medical profession for the public good.

The plan of looking after the medical needs of the poor and of making provision for efficient laboratory work as outlined in this address, is commended as being worthy of adoption by many—probably all—communities in this state.

Inasmuch as the successful carrying out of the plan of co-operative work submitted requires the approval of city and county administrative officials, we regard it highly desirable that the substance of the address be given wide publicity. We therefore recommend that copies of the President's Address be furnished to the public press.

We also recommend that this report be spread upon the minutes of this Society.

HENRY ALBERT, Chairman,
G. E. DECKER,
V. L. TREYNOR."

Upon motion by Dr. E. H. King, duly seconded, report of the committee was adopted.

Dr. E. T. Edgerly, Ottumwa, read the "Oration on Medicine."

Dr. J. N. Warren, Sioux City, read a paper on "A Study of the Sacro-Iliac Articulation." Discussed by Drs. C. H. Magee, Burlington; S. A. Spilman, Ot-

tumwa; L. W. Littig, Davenport, and John F. Herrick, Ottumwa, the essayist closing the discussion.

Friday, May 12—Morning

Meeting was called to order by Vice-President Luckey at nine-thirty o'clock.

Dr. F. G. Murray, Cedar Rapids, read a paper on "Some Practical Points in the Treatment of Children's Diseases." Discussed by Drs. C. F. Wahrer, Fort Madison; G. N. Ryan, Des Moines; John F. Herrick, Ottumwa; M. F. Boyd, Iowa City, W. H. Rendleman, Davenport, and F. G. Murray in closing.

Dr. J. Rilus Eastman, Indianapolis, then gave the Address on Surgery, his subject being, "The Alimentary Drainage Scheme in Man."

Dr. C. E. Ruth, Des Moines, read a paper on "Tumors of the Hypophysis Cerebri," which was illustrated by photographs and x-ray pictures. No discussion.

The Secretary presented a summary of proceedings had in the House of Delegates, as follows:

Summary of the Proceedings of the House of Delegates

The first session was held Wednesday, May 10, 1916 at 4:30 p. m. There were sixty-five delegates present and the session was taken up with routine reports, and a special report on workmen's compensation which was generally discussed and then laid over until Thursday morning.

At the Thursday morning session reports of committees were continued, and a further discussion of workmen's compensation was had which subject was finally laid over until next year.

At this session the Secretary presented his resignation which was accepted.

At the Friday morning session the first order of business was the election of officers. (For list of officers elected see minutes of House of Delegates.)

At this session the special assessment of \$1.00 per member for the Medico-Legal Fund was continued for the year 1917 and the By-Laws were amended so as to permit the payment of costs for transcript of evidence in appealed cases.

Des Moines was selected for the 1917 meeting place, time, second Wednesday in May.

The President announced that if there was no objection, report of the Secretary would be placed on file and appear in the Journal.

In calling President Herrick to take his place as Presiding officer, the retiring President said:

"I want to take this opportunity to thank the members of the Society for the courtesy that has been shown me during my term of office. I assure you that I shall always with deepest gratitude look back upon the associations that I have had during the past year. And now I have the great pleasure, second only to that experienced in holding the office myself, of presenting to you our fellow member, Dr. John F. Herrick of Ottumwa, as your President."

President Herrick: "President Small, Ladies and Gentlemen of the Iowa State Medical Society: The Presidency of the Iowa State Medical Society is the greatest honor within the gift of the physicians of

the state. My election to this office is the greatest event of my life. I assure you your good will and kindness are appreciated. I wish from the bottom of my heart to thank the members of the Iowa State Medical Society, for so great an honor. The realization of my unworthiness grows upon me. As the months of the past year have come and gone, the magnitude of the task becomes apparent, and it is with considerable trepidation that the work is undertaken.

An organization including, as does this Society, the vast majority of the active and progressive physicians of the state, deserves to be officered by men of breadth of view, constructive mind, executive ability and scientific attainments. In all these your humble servant is very much wanting. Our work is not for today. In all their efforts, those guiding the destiny of the Society should have in mind the future of medicine in the state and nation, but especially should they be solicitous for the welfare of those who look to the profession for life and health.

Universities are not bounded by brick and mortar, but by the utmost limits of their influence. The State Society is a great post-graduate university, and its influence for good should reach not only every hamlet in the state, but should radiate far beyond into remote communities. We meet in societies from time to time to exchange views, to receive and impart new ideas, and to learn from those more favored than ourselves the new and worthy things of our profession. The county society should be, and is, the foundation; as it goes, so does the district and state society go.

Two aims may be kept in view in the work of the county society: One is the benefit it may bring to the local members and the community they serve; and a second, the development of talent which may be passed on to the more advanced work of the district and state societies and to the national association. The greatest success is attained when the members of a society develop their own talent by faithful, persevering efforts. No education is so beneficial as that gained by persevering, arduous labor. Every member of a county society should actively participate in its work, they should vie with one another in an endeavor to produce the best papers and most interesting discussions. Except occasionally, when one with special qualifications or preeminent ability is invited to contribute to the interest and instruction, the work should be done by the members themselves. In time this active participation in the work of the county society leads to a freer participation in the work of the district and state societies.

It should be the purpose of the State Society to foster and encourage widespread individual effort that a knowledge of all that is worth while in medicine may be the heritage of every member. Thus may be fulfilled the highest function of the State Society that it harmonizes and synchronizes the efforts of its members, supplements the work of the county societies, and serves in multitudinous ways the functions of a great university.

How well this has been done in the past by the Iowa State Medical Society the large attendance at its meetings, the high character of its programs, and the very general participation in the proceedings of the Society, testify.

In conclusion: Since it has been your pleasure to allow me to follow in office men of acknowledged ability and of national reputation, you must bear with my shortcomings. It shall be my pleasure to give my best efforts to the work. Any effort on my part, however, can only supplement the work of the other and more efficient officers of the Society. I bespeak for myself their aid and assistance as well as the help of every member of the Society. Again I thank you."

Dr. G. E. Crawford, Cedar Rapids, introduced the following resolution:

"Resolved, That in accordance with the recommendations made by Dr. A. M. Pond in his address on "The Cancer Problem," read before this Society Thursday morning, the President be authorized to appoint a committee of one hundred (100) members consisting of a chairman from the state and one committeeman from each county, to work in conformity with the plans suggested by Dr. Pond."

It was moved by Dr. M. N. Voldeng, Woodward, that the resolution presented by Dr. Crawford be adopted. Motion seconded. Carried.

Dr. Campbell P. Howard, Iowa City, read a paper on, "Para-Typhoid Fever." No discussion.

Dr. D. W. Ward, Oelwein, read paper on, "Certain Types of Appendicitis." No discussion.

Upon motion, unanimously carried, a vote of thanks was extended to the Committee of Arrangements and to the members of the Scott County Medical Society, for the splendid entertainment afforded during the meeting in Davenport.

Adjourned.

J. W. OSBORN, Sec'y.

Transactions of the House of Delegates Iowa State Medical Society

Sixty-fifth Annual Session, Davenport, Iowa, May
10, 11, 12, 1916

WEDNESDAY, 4:30 P. M., MAY 10, 1916

The House of Delegates held its first meeting in the ball room of the Blackhawk Hotel, being called to order by President W. B. Small. Roll call showed the presence of sixty-five members.

The Secretary, Dr. J. W. Osborn, read his annual report, which was referred to the Finance committee.

SECRETARY'S REPORT

Your Secretary begs leave to make the following report:

The total membership for 1915 was 2,133; for 1914, 2,061; for 1913, 2,019 and for 1912, 2,000. The 1916 dues from 2,050 members have been received so far this year.

For the year May 1, 1915 to April 30, 1916, inclu-

sive, the following moneys have been received and turned over to the Treasurer:

| | |
|---------------------|-------------|
| Dues | \$11,412.00 |
| Advertising | 3,481.86 |
| Reprints | 437.68 |
| Sales | 28.22 |
| Subscriptions | 22.00 |
| Exchange | .20 |
| Total..... | \$15,381.96 |

Orders as follows have been issued since my last report:

| | | |
|-----|---|-----------|
| No. | | |
| 621 | J. W. Osborn, salary Feb., 1915 to May, 1915, postage and office expense..... | \$ 268.91 |
| 622 | Wade, Dutcher & Davis, medico-legal services, Jan., Feb. and March, 1915..... | 334.80 |
| 623 | Wolfe & Wolfe, Clinton, medico-legal services Baker vs. Dr. J. C. Langan..... | 150.00 |
| 624 | Miles & Steele, medico-legal services, Handlin vs. Burchett..... | 50.00 |
| 625 | J. H. Welch Prtg. Co., April and May Journal and programs 1915 Session..... | 615.05 |
| 626 | J. F. Aldrich, councilor expense..... | 7.00 |
| 627 | F. J. Ainsworth Co., badges 1915 Annual Session | 18.00 |
| 628 | James Black Dry Goods Co., Waterloo, mdse., 1915 Session..... | 5.23 |
| 629 | H. D. Fairall, Waterloo, placards 1915 Session | 13.55 |
| 630 | W. B. Small, salary and expenses..... | 169.25 |
| 631 | C. A. Boice, councilor expenses; expenses assistant editor and adv. mgr..... | 85.92 |
| 632 | Thos. F. Duhigg, expenses com. Public Policy and Legislation..... | 270.68 |
| 633 | Dr. Henry Albert, councilor and committee expense | 13.19 |
| 634 | Paul E. Gardner, councilor expense..... | 6.50 |
| 635 | G. E. Crawford, councilor expense..... | 1.00 |
| 636 | Jeannette F. Throckmorton, com. expense, Health and Public Instruction..... | 18.45 |
| 637 | Bertice Blaisdell, registration expense, Waterloo | 6.25 |
| 638 | Mrs. D. P. Powell, registration expense, Waterloo | 6.25 |
| 639 | Roger Loveland, ass't sec'y, Waterloo | 6.25 |
| 640 | Waterloo Office Supply Co., expense, Waterloo | 1.25 |
| 641 | Grace M. E. Church, Waterloo, rent..... | 75.00 |
| 642 | Gertrude Van Gorder, reporting House of Delegates | 15.00 |
| 643 | Dr. Thos F. Duhigg, exp. com. Public Policy Legislation | 58.48 |
| 644 | Fred S. Young Co., bond cost sec'y and treas. | 50.00 |
| 645 | Bankers Cabinet & Supply Co., Des Moines, printing 2500 envelopes..... | 5.95 |
| 646 | Order drawn in error canceled..... | |
| 647 | Waterloo Electrical Supply Co., rent, lumber, wire at Waterloo..... | 4.05 |
| 648 | J. H. Welch Prtg. Co., June Journal and reprints | 302.50 |

| | | |
|-----|--|--------|
| 649 | Adelaide Folsom, reporting General Session, Waterloo | 135.00 |
| 650 | D. S. Fairchild, Sr., editors salary April, May and June, 1915..... | 375.00 |
| 651 | J. H. Welch Prtg. Co., July Journal, reprints, constitution and by-laws..... | 315.05 |
| 652 | J. H. Welch Prtg. Co., Aug. Journal and reprints | 324.00 |
| 653 | Economy Adv. Co., Iowa City, stationery for council and com. Health and Public Instruction | 30.00 |
| 654 | Dutcher & Davis, medico-legal service April 2, 1915 to June 14, 1915..... | 151.71 |
| 655 | D. H. Bowen, exp. attending Trustee's meeting June 30 and Sept. 24, 1915 | 42.00 |
| 656 | J. W. Osborn, salary May 15 to Aug. 15, 1915, office expense, postage, etc..... | 284.61 |
| 657 | J. H. Welch Prtg. Co., Sept. Jour., reprints and envelopes..... | 294.60 |
| 658 | J. H. Welch Prtg. Co., Oct. Jour. and reprints | 313.95 |
| 659 | D. S. Fairchild, editor's salary, July, Aug. and Sept., 1915..... | 375.00 |
| 660 | Dutcher & Davis, medico-legal services, July, Aug. and Sept., 1915..... | 644.65 |
| 661 | J. W. Osborn, com. on adv. for 1915..... | 355.75 |
| 662 | J. W. Osborn, salary Aug. 15 to Nov. 15, 1915, office expense and postage..... | 237.69 |
| 663 | J. H. Welch Prtg. Co., Nov. Jour. reprints and index cards..... | 307.65 |
| 664 | W. C. Garberson, medico-legal services, McGrady vs. Cadwallader..... | 25.00 |
| 665 | D. S. Fairchild, salary Oct., Nov. and Dec., 1915 | 375.00 |
| 666 | J. H. Welch Prtg. Co., Dec. Jour. and reprints | 308.25 |
| 667 | J. W. Osborn, mailing Dec. Jour. and stamps | 50.00 |
| 668 | J. H. Welch Prtg. Co., Jan., 1916 Jour. reprints, wrappers and rev. stamps..... | 341.63 |
| 669 | J. H. Welch Prtg. Co., Feb. Jour. and reprints | 349.15 |
| 670 | J. H. Welch Prtg. Co., March Jour., reprints and paper..... | 350.70 |
| 671 | D. S. Fairchild, editor's salary, Jan., Feb. and March, 1916..... | 375.00 |

JOURNAL STATEMENT FOR 1915—JAN. 15 TO DEC. 15., INC.

| | |
|--|------------|
| Income | |
| Total Advertising | \$3,577.54 |
| Reprints | 432.98 |
| Sales | 21.12 |
| Subscriptions | 12.00 |
| Dues (2100 members)..... | 2,100.00 |
| | \$6,143.64 |
| Expenses | |
| Printing and cuts..... | \$3,214.20 |
| Miscellaneous (bill heads, wrappers, contracts, etc.)..... | 55.00 |
| Printing reprints and price list..... | 415.65 |
| U. S. Postoffice mailing..... | 117.00 |

| | | |
|--------------------------------|-------------------|------------|
| City delivery | 15.00 | |
| Discount | 274.04 | |
| Commission on advertising..... | 355.75 | |
| Editor's salary | 1,500.00 | |
| | <u>\$5,946.64</u> | |
| Profit | \$ 197.00 | \$6,143.64 |

Respectfully submitted,
J. W. OSBORN, Sec'y.

The report of the Treasurer, Dr. Thos. F. Duhigg, was read and referred to the Finance Committee.

TREASURER'S REPORT

Statement of receipts and disbursements of the Treasurer of the Iowa State Medical Society from June 21, 1915 to April 30, 1916.

Receipts

| | | |
|---|--------------------|-------------|
| Received from Dr. W. B. Small, retiring Treasurer June 21, 1915..... | \$ 2,545.20 | |
| Membership dues for the year..... | 11,412.00 | |
| Journal Receipts: | | |
| Advertising | \$3,481.86 | |
| Subscriptions, sales and reprints | 478.35 | \$ 3,960.21 |
| | <u>\$17,917.41</u> | |

Disbursements

| | | |
|--|--------------------|--|
| Expended as per checks listed below..... | \$ 8,919.90 | |
| Balance on hand..... | 8,997.51 | |
| | <u>\$17,917.41</u> | |

Detailed statement of disbursements by the Treasurer of the Iowa State Medical Society, June 21, 1915 to April 30, 1916.

| | | | | | | | |
|-----|------|---|-----------|----|-------|--|------------|
| No. | 1915 | | | 38 | 10-21 | Welch Prtg. Co., Journals..... | 294.60 |
| 1 | 6-21 | Dr. J. W. Osborn, Secretary, salary expense | \$ 268.91 | 39 | 11-20 | Welch Prtg. Co., Journals..... | 313.95 |
| 2 | 6-21 | Wade, Dutcher & Davis, legal fees | 334.80 | 40 | 12- 9 | Dr. J. W. Osborn, salary and expense | 237.69 |
| 3 | 6-21 | Wolfe & Wolfe, legal fees..... | 150.00 | 41 | 12- 9 | Dr. J. W. Osborn, commission on advertising | 355.75 |
| 4 | 6-21 | Miles & Steele, legal fees..... | 50.00 | 42 | 12- 9 | Dr. D. S. Fairchild, salary..... | 375.00 |
| 5 | 6-21 | Dr. J. F. Aldrich, councilor expense | 7.00 | 43 | 12-13 | Wade, Dutcher & Davis, legal fees | 644.65 |
| 6 | 6-21 | F. J. Ainsworth, badges..... | 18.00 | | 1916 | | |
| 7 | 6-21 | Black Dry Goods Co., Waterloo, cambric to darken church..... | 5.23 | 44 | 1-18 | W. G. Garberson, legal fees..... | 25.00 |
| 8 | 6-21 | H. D. Fairall, Waterloo, placards | 13.55 | 45 | 1-18 | Welch Prtg. Co., Journal and reprints | 307.65 |
| 9 | 6-21 | Dr. Small, President, salary exp. | 169.25 | 46 | 1-18 | Dr. D. S. Fairchild, salary..... | 375.00 |
| 10 | 6-21 | Dr. C. A. Boice, councilor exp. | 85.92 | 47 | 2- 7 | Welch Prtg. Co., Journal and reprints | 308.25 |
| 11 | 6-21 | Dr. Thos. F. Duhigg, Legislative Com. expense..... | 270.68 | 48 | 2-24 | Welch Prtg. Co., Journal and reprints | 341.63 |
| 12 | 6-23 | J. H. Welch Prtg. Co., Journal and reprints | 615.05 | 49 | 2-24 | Dr. Osborn, expense..... | 50.00 |
| 13 | 7-17 | Dr. Henry Albert, councilor exp. | 13.19 | 50 | 3-29 | Welch Prtg. Co., Journal and reprints | 349.15 |
| 14 | 7-17 | Dr. Paul E. Gardner, councilor expense | 6.50 | 51 | 4-21 | Welch Prtg. Co., Journals..... | 350.70 |
| 15 | 7-17 | Dr. G. E. Crawford, councilor expense | 1.00 | 52 | 4-21 | Dr. D. S. Fairchild, salary..... | 375.00 |
| 16 | 7-17 | Dr. Jeannette F. Throckmorton, expense, Health and Public Instruction | 18.45 | | | Total..... | \$8,919.90 |
| | | | | | | The following statement from The People's Savings Bank shows the money on hand April 30, 1916: | |

The following statement from The People's Savings Bank shows the money on hand April 30, 1916.

PEOPLE'S SAVINGS BANK

Des Moines, Iowa, May 3, 1916.

This is to certify that there was on deposit in this bank at the close of business April 29, 1916, to the credit of T. F. Duhigg, Treasurer of the Iowa State Medical Society the sum of eighty-nine hundred and ninety-seven dollars and fifty-one cents (\$8,997.51), of this amount nineteen hundred and ninety-seven dollars and fifty-one cents (\$1,997.51) is on open account and subject to check. Accrued interest to May 1, 1916 on \$7,000.00 amounts to \$56.66.

CARL W. MESMER,
Ass't Cashier.

State of Iowa, Polk County, ss.

On this 3rd day of May, A. D., 1916, before me appeared Carl W. Mesmer, Ass't Cashier of the People's Savings Bank, Des Moines, Iowa, who acknowledged the above to be a true and correct statement of the account mentioned according to the records of the People's Savings Bank.

ROSCOE C. MORROW,
Notary Public in and for Polk County, Ia.

Recapitulation

The report shows total receipts of \$17,917.41; total expenditures \$8,919.90; leaving a balance on hand of \$8,997.51, of which \$7,000 is on time deposit and \$1,997.51 subject to check. The interest due, amounting to \$56.66, does not appear on my report as it is not yet placed to my credit. It does appear in the certified statement from the bank.

Receipts from advertising amounted to \$3,481.86 and is a very credible showing for this item. It will be noted that the expenditures were slightly less than half of my total receipts and amounted to about 60 per cent. of my receipts from the Secretary for the year, leaving a comfortable margin of almost \$9,000. However, there are probably \$1,500 to \$2,000 in debts to be paid immediately after this meeting which will still leave us about \$7,000.

Although this is a rather flattering financial report, I do not believe that the dues should be reduced but recommend that they be maintained at the present figure until our financial condition becomes permanently secure. Under the compensation law, malpractice suits are increasing and the extent of their increase may not yet reach the maximum.

Our position has always been precarious when the dues were less than they are now. This is the first time in several years that we have had a feeling of absolute security. In view of the fact that the defense item is only \$3.00 per year which is but one-fifth of what insurance companies charge, I believe this should be continued permanently. If it causes a surplus to accumulate it can be used to defray court expenses, thus increasing the value of the defense.

Very respectfully yours,

THOS. F. DUHIGG, Treas.

Report of Trustees: Passed until the following morning.

Report of the Medico-Legal committee was presented by Dr. D. S. Fairchild, chairman, and on motion was received and placed on file.

REPORT ON MEDICAL LEGAL DEFENSE OF
THE IOWA STATE MEDICAL SOCIETY,
APRIL 1, 1915 TO APRIL 1, 1916

The first consideration in malpractice defense is efficiency. To secure this, two things are necessary. The first is the preparation of the case, which so many fail to appreciate. The committee must know the facts, not only as to the nature of the case and the treatment, but also as to the present condition of the patient. The committee must know, as far as possible, the degree of disability; that is, the amount of deformity and the ability or inability to use a part for the ordinary duties that the patient has to perform. The committee must know, as far as possible, the conduct of the patient while under treatment and afterwards. The committee must know the names and addresses of other physicians who have seen or treated the case. It is necessary for the committee to follow the patient from one place to another and secure all the information and opinions that may have a bearing on the case, in order to formulate the medical theory on which the case must be tried. An outline of the case should be furnished within ten days after notice of suit is filed in order that an answer may be filed. For this purpose, a copy of the petition is all that is necessary. The history of the case can be made up later, and arranged and adjusted so that our attorney may have the medical facts before the case comes to trial. It frequently happens that the only information furnished us is a letter saying that the defendant doctor has been sued, apparently leaving the matter to the committee to find out why he is sued, what the case is, etc.

Second—The attorney. A good attorney may fail utterly in the trial of a malpractice suit. It requires a special training and a special fitness for this work, as much so as in the practice of the different branches of medicine and surgery. The fees must be liberal, as the particular talent for this service is difficult to find. Strange as it may seem, the same prejudice exists in the minds of the jury, and often in the minds of the court, as against corporations, and sentiment is equally potent.

The claimant appears before a jury, and the court with a tale of suffering and of permanent disability, and all due to the unskillful and negligent care of a surgeon who demands a large fee for the services, and the defendant will be astonished at the many things that the relatives and friends and neighbors will sometimes remember and testify to in court, that he never heard of before, and he knows are absolutely contrary to facts, and yet they appear against him as evidence. In recent years, new points of law, and new court decisions have been rendered as to the duties and obligations of physicians. Economic conditions have changed; new discoveries

Report of Council: Passed until the following morning.

have been made in medicine and surgery, which have increased the obligations of the doctor, and also revealed the shortcomings, as in X-ray examinations. All these have rendered malpractice suits more difficult to defend. The old relations of family physician have changed to commercial relations. Nothing is overlooked, forgotten, or forgiven.

Then comes the ambition of members of the profession to enter new fields of enterprise, for which it sometimes happens they are not thoroughly prepared, and they assume responsibilities that may be dangerous. It is to be observed that while the leading and most skillful physicians and surgeons are not immune from malpractice suits, yet the great majority of cases occur among the general practitioners in both country and city. We have found by going over the cases that come to us, that the men who do large surgical practice, have the least number of malpractice suits. Probably not more than one in ten of the cases of doctors who have been sued in Iowa, are men who are known outside of their own county, so that the contributions made for medical defense largely go to the protection of the men that claimants think can be easily imposed upon.

The committee gather the information in regard to a suit for malpractice, from every source, get it together, formulate a medical theory for the defense, and co-operate with our attorney to get the best results when the trial comes, both in the matter of expert evidence, and in the proper application of the law insofar as it is favorable to the interest of the defendant. It goes without saying that the committee must control the instrumentalities through which the work is done, and unless there is close and exacting co-operation between the committee and the attorney, serious loss may follow.

Dutcher & Davis, 1915-16

| | |
|---|-------------------|
| 1st quarter, April to July, 1916..... | \$ 151.71 |
| 2nd quarter, July to October, 1915..... | 644.65 |
| 3rd quarter, October to Jan., 1916..... | 952.07 |
| 4th quarter, Jan. to April, 1916..... | 1,021.70 |
| | <u>\$2,770.13</u> |

Local Attorneys 1915-16

| | |
|------------------------------|-------------------|
| J. P. Conner..... | \$ 265.94 |
| W. C. Gaberson..... | 25.00 |
| Helsell & Helsell..... | 100.00 |
| Senneff, Bliss & Witwer..... | 380.00 |
| Chase, Seaman & Sutton..... | 169.57 |
| | <u>\$ 940.51</u> |
| Dutcher & Davis..... | \$2,770.13 |
| Local attorneys | 940.51 |
| | <u>\$3,710.64</u> |

Cases Disposed of April 1, 1915 to April 1, 1916

| | No. | Cost |
|-----------------------------------|-----|-----------|
| Cases dismissed by plaintiff..... | 5 | \$ 518.54 |
| Cases settled out of court..... | 5 | 712.13 |
| Verdict by court (directed)..... | 2 | 466.19 |

| | | |
|----------------------|----|-------------------|
| Verdict by jury..... | 2 | 1,467.82 |
| Cases not sued..... | 1 | 5.00 |
| Total..... | 14 | <u>\$3,169.68</u> |

Cost of adjustment to defendants in the following cases—April 1, 1915 to April 1, 1916:

| No. | | |
|-----|---|-------------------|
| 47 | Verdict | \$ 750.00 |
| 104 | Settled at defendant's request for..... | 150.00 |
| 111 | Verdict | 500.00 |
| 128 | Settled by paying \$450 and including professional services | 450.00 |
| 129 | Settled by paying..... | 650.00 |
| 131 | Settled on defendant's own motion, by paying | 150.00 |
| 135 | Settled on advice of our attorney for (case not sued)..... | 75.00 |
| 91 | Case settled for..... | 350.00 |
| | | <u>\$3,075.00</u> |
| | Voluntary settlement of cases out of court..... | \$1,825.00 |
| | Verdicts | 1,250.00 |
| | | <u>\$3,075.00</u> |

Cost of adjustment to defendants in the following cases—up to April 1, 1916. (All cases.)

| No. | | |
|-----|---|-------------------|
| 1 | Paid \$100.00 settlement of claim..... | \$ 100.00 |
| 4 | Suit for bill. Counterclaim malpractice. Settlement, party paying cost..... | |
| 6 | Settled for | 87.50 |
| 45 | Settled for | 250.00 |
| 44 | Settled for | 100.00 |
| 46 | Settled for \$300.00 against our advice.... | 300.00 |
| 51 | Settled for | 300.00 |
| 52 | Involved expenses of transcribing evidence for Supreme Court..... | |
| 54 | Verdict of \$1,100.00..... | 1,100.00 |
| 58 | Settled for | 100.00 |
| 65 | Settled, Dr. withdrawing his claim for services of | 645.15 |
| 91 | Verdict of \$300.00 from each defendant | 600.00 |
| 96 | Settled for \$2,500.00 (jury disagreed).... | 2,500.00 |
| 104 | Settled at defendant's request, for..... | 150.00 |
| 111 | Verdict | 500.00 |
| 116 | Settled for \$100.00..... | 100.00 |
| 124 | Settled by doctor withdrawing claim for services | |
| 128 | Settled by paying \$450.00 and including professional services | 450.00 |
| 129 | Settled by paying..... | 650.00 |
| 131 | Settled on defendant's own motion, by paying | 150.00 |
| 135 | Settled on advice of our attorney for (case not sued)..... | 75.00 |
| 47 | Verdict | 750.00 |
| 91 | Settled for | 350.00 |
| | | <u>\$9,257.65</u> |

Total up to April 1, 1916.....

| | |
|---|------------|
| Voluntary settlement of cases out of court..... | \$6,307.65 |
| Verdicts | 2,950.00 |

Total

Verdict by Jury—2

Case No. 47—Tongue injured in operation for removal of tonsils. Judgment rendered for \$1,100.00. Appealed to the Supreme Court. Lower court affirmed. Judgment reduced to \$750.00.....\$ 491.42

Case No. 111—This was the case of a man who had a compound dislocation of the distal end of the clavicle and fracture of the femur in about the middle of the shaft, and bruises to his chest. The fracture of the femur was reduced and retained in position by weight and pulley and short lateral splints. The shoulder was dressed in as comfortable a way as possible. The accident occurred November 16, 1913. On December 27th it was found that there was no union. Splints were again applied and continued until January 11, 1914. It was believed at that time that union had occurred. Did not report to medical advisor until March 14, 1916, in the meantime he had gone to another doctor for X-ray picture, showing displacement. Was sent to hospital in adjoining city for surgical treatment. Fell into the hands of a surgeon not particularly friendly. An operation was performed for non-union, and the fracture was treated as an open fracture. Did not know about method of uniting bone. Wound became very badly infected and patient confined to hospital many weeks. Afterwards went to the Mayo Clinic for consultation and treatment. No treatment given at this place, and patient returned home. Shortening two or three inches. Verdict of \$500.00 rendered against defendant. Patient filed motion for new trial, which was denied.....\$ 976.40

Total.....\$1,467.82

Directed Verdict—2

Case No. 77—X-ray burn in three exposures for a stone in the kidney. Case tried before a jury and verdict rendered by the court. Plaintiff appealed. Supreme Court affirmed the lower court.....\$ 252.82

Case No. 101—Fracture of radius. Fracture reduced. Patient uncontrollable. Dressings frequently displaced. Bones failed to unite. Subsequent operation by doctor. Case tried October 26 and 27, 1914. Directed verdict 213.37

Total.....\$ 466.19

Cases Dismissed by Plaintiff—4

Case No. 88—Suppurating kidney. Drainage. Alleged negligence in leaving sponge. Failure on the part of plaintiff to secure medical evidence of negligence, resulted in dismissing the case after being set for trial several times. Expenses in case.....\$ 347.42

Cost

Case No. 108—Operation for appendicitis. Five days later, pneumonia appeared. Recovery. Patient claims great mental and bodily anguish for having an alleged unnecessary operation, which resulted in formation of adhesions. Case dismissed..... 15.00

Case No. 113—Badly lacerated finger, which became infected. Later, part of the finger amputated. Flaps became infected and sloughed. Infection extended into hand, causing an abscess. Recovery, after considerable delay. Plaintiff dismissed without prejudice 156.12

Case No. 127—Counterclaim. Statute of limitations had run. Case dismissed. No expenses 518.54

Total.....\$ 518.54

Settled out of Court—5

Case No. 104—Colle's fracture from automobile accident. Accident happened May 29th. X-ray examination June 24th, showed deformity. Refused to have surgical treatment for correction of deformity, and sued. Case settled at defendant's request for \$150. 24.88

Case No. 129—This was a case where plaintiff was burned by hot water bottle, while in the doctor's private hospital. Burn said to have been severe, resulting in considerable deformity. Case was settled by defendant paying plaintiff \$250.00. Patient not satisfied with settlement and sued for \$20,000. Jury rendered verdict for \$2,250.00. Motion for new trial, which was granted. In the meantime, defendant settled the case by paying \$400.00. 630.75

Case No. 128—Case of compound fracture of right femur. In this case the doctor's chauffeur ran over a boy riding a bicycle. The doctor was summoned and treated the child from March 30th to the middle of May, when the patient was taken to Rock Island where it is claimed that the femur failed to unite, and was very much out of place. Case operated by another doctor, securing finally a fairly good result. The doctor was sued for malpractice. The doctor prior to this time had paid the boy \$150.00, and including professional services. After many months of negotiation, the claim for malpractice was withdrawn, and the doctor paid an additional \$300.00 for the damages inflicted by the auto. Expenses in this case..... 48.00

Case No. 131—Fracture of radius. Bone failed to unite, and was operated on by another doctor with the result of the filing of a claim for damages of \$15,000.00. This case was settled without suit, on the defendant's own motion by paying the sum of \$150.00..... 8.50

Case No. 91—This was a case of fracture of the humerus and dislocation of elbow and shoulder. Dislocation of elbow overlooked

in the treatment. Suit for \$10,000. After 8 days trial, verdict for \$600.00, which was paid. Husband began suit for services of wife. Case disposed of, defendant paying paying plaintiff \$350.00. Cost of case.....\$ 421.30

\$1,133.43

Cases Not Sued—1

Case No. 135—Child two years old fell down and received an injury. Diagnosed a few bruises. A year later, noticed child was lame. X-ray showed dislocation. Leg smaller and shorter than other. Settled for \$75.00 on advice of our attorney.....\$ 5.00

The committee is of the opinion that a membership fee of \$5.00 would be sufficient to cover all the expenses of the Society, including an efficient medical defense against malpractice claims. The experience of some of our neighboring states has been that the profession has not had confidence in the State Medical Society defense, on account of its not being conducted on business principles; that instead of adopting plans of defense such as corporations have learned to rely on, the medical defense has been conducted on a mixed plan of sentiment and business and expedience, which a business corporation would at once reject as cumbersome and inefficient. The committee is of the opinion that an efficient and able medical defense is as important to the medical practitioner as it is to a business corporation. To a medical practitioner, the consequences of the loss of a case in a judgment against him, are more serious than they would be to a business corporation, not only insofar as the loss of money is concerned, but insofar as his reputation as a physician and surgeon is concerned.

The committee recommend that the \$5.00 fee for membership in the State Society be continued until a certain fund has been accumulated, which can be used when emergency conditions arise.

The committee is of the opinion that with a \$5.00 membership fee, the court expenses which are assessed to the defendant in case of a judgment being rendered against him, could be paid by the Society, and leave the doctor free from legal and court expenses (cost of transcript) in his defense against an unjust claim for damages.

Respectfully submitted,
D. S. FAIRCHILD, Chairman.

CONDENSED REPORT OF CASES AGAINST MEMBERS OF THE IOWA STATE MEDICAL SOCIETY

The following is a summary of certain particulars in all cases commenced since the establishment of the Medical Defense Committee of the Association:

| | |
|--|-----|
| Cases commenced since organization of department | 113 |
| Cases commenced prior to the report of 1909..... | 15 |
| Cases commenced during 1909-1910..... | 13 |
| Cases commenced during 1910-1911..... | 10 |
| Cases commenced during 1911-1912..... | 14 |

| | |
|---|----|
| Cases commenced during 1912-1913..... | 13 |
| Cases commenced during 1913-1914..... | 10 |
| Cases commenced during 1914-1915..... | 24 |
| Cases commenced during 1915-1916..... | 19 |
| Cases pending at date of 1909 report..... | 7 |
| Cases pending at date of 1910 report..... | 10 |
| Cases pending at date of 1911 report..... | 14 |
| Cases pending at date of 1912 report..... | 25 |
| Cases pending at date of 1913 report..... | 26 |
| Cases pending at date of 1914 report..... | 21 |
| Cases pending at date of 1915 report..... | 28 |
| Cases now pending..... | 33 |
| Total cases disposed of..... | 89 |

Nature of Cases

| | |
|--|----|
| Malpractice in removing seed wart..... | 1 |
| Malpractice in not discovering and uniting severed ligaments of the wrist..... | 1 |
| Alleged assault | 2 |
| Removal of cancer of the hand..... | 1 |
| Conspiracy to have plaintiff declared insane..... | 1 |
| Fracture of arm..... | 22 |
| Fracture of leg or femur..... | 31 |
| Appendicitis—sponge case | 1 |
| Operation for kidney—sponge case..... | 1 |
| Appendicitis—malpractice in operation..... | 3 |
| Appendicitis—exploratory opening | 1 |
| Childbirth, alleged failure to attend after alleged agreement to do so; child died (separate action by father and mother)..... | 2 |
| Hand crushed, alleged improper treatment..... | 1 |
| Eye, alleged improper treatment..... | 1 |
| Infection, childbirth | 2 |
| Medical treatment of child..... | 1 |
| Abortion, improper after-treatment..... | 3 |
| Abortion, without justification..... | 2 |
| Improper treatment of nail puncture in foot..... | 1 |
| Alleged removal of wrong kidney..... | 1 |
| Stomach trouble, alleged improper treatment and failure to treat..... | 1 |
| Anesthetic, death under..... | 1 |
| Improper diagnosis of diphtheria..... | 1 |
| Improper diagnosis of broken ribs..... | 1 |
| Removal of uterus, alleged negligent incision of the bladder | 1 |
| X-ray burn | 2 |
| Infection following amputation..... | 1 |
| Alleged improper treatment of scald..... | 1 |
| Removal of adenoids..... | 2 |
| Alleged improper abdominal incision..... | 2 |
| Failure to administer serum, patient died of lock jaw | 1 |
| Fracture of collar bone..... | 1 |
| Willful insertion of instrument, producing abortion | 1 |
| Operation for pregnancy of fallopian tube..... | 1 |
| Negligent administration of poison, causing death | 1 |
| Improper treatment of wound in leg from kick of horse | 1 |
| Alleged negligence in communicating erysipelas to woman in childbirth..... | 1 |
| Negligence in suffering patient mentally delinquent to jump out of unguarded window in private sanitorium | 1 |

| | |
|--|----------------|
| Negligent amputation of finger..... | 2 |
| Negligence in attending cut severing cords of hand | 1 |
| Wrongfully administering morphine..... | 1 |
| Communicating smallpox to patient in hospital.... | 1 |
| Fracture of lower jaw..... | 1 |
| Dislocation of knee..... | 1 |
| Cancer of stomach..... | 1 |
| Draining pelvic abscess..... | 1 |
| Operation for tonsils without consent..... | 1 |
| Negligence in removing button from child's throat | 1 |
| Hot water bottle burn..... | 1 |
| Total amount of damages claimed in all cases to date..... | \$1,240,448.00 |
| Judgments recovered against members.... | 3 |
| Aggregate amount of judgments..... | 4,475.00 |
| Total amount of judgments paid..... | 2,950.00 |
| Consultation on cases threatened in which no proceedings were had..... | 62 |

DUTCHER, DAVIS & HABENICHT.
Iowa City, Iowa, May 8, 1916.

Committee on Health and Public Instruction. Not ready to report.

Committee on Constitution and By-Laws. Passed.
Finance Committee. Passed.

Public Policy and Legislation Committee. No report. No session of legislature.

Committee on Workmen's Compensation, Dr. J. F. Herrick, chairman, reported as follows:

The Committee appointed by President Small to draft a schedule of fees for physicians under the workmen's compensation laws of Iowa, beg to submit herewith our report. We met with a like committee representing the insurance carriers and adopted the accompanying schedule. The report is signed by the members of both committees. We had at hand, while formulating this fee bill, the schedules of several other states and utilized the information gained from them. We realize that no fee bill can be made which is satisfactory in every way to any of the parties concerned. It must be more or less of a compromise.

We hope, however, our work will meet with your approval.

J. F. HERRICK,
H. C. ESCHBACH,
D. S. FAIRCHILD.
Committee.

Report of Committee Iowa State Medical Society, workmen's compensation medical and surgical fee bill.

| Schedule of Rates | | |
|---|-----------|-----------------------------|
| Ordinary Items | First Aid | Subsequent Treatment Office |
| Ordinary day visit at house, including antiseptic dressing when necessary | \$ 2.00 | \$ 1.00 |
| Mileage beyond city limits—per mile one way | .50 | ..... |

| | | |
|--|------|-------|
| Ordinary day visit at hospital, including antiseptic dressing when necessary | 1.50 | 1.00 |
| Ordinary office treatments, including antiseptic dressing when necessary | 1.00 | 1.00 |
| Visit—including antiseptic dressing and necessary operative procedures in ordinary cases of incisions, punctures, lacerations and contusions | 2.00 | 1.00 |
| Night visit—9 p. m. to 7 a. m..... | 3.00 | ..... |
| Formal detailed report by attending physician at special request of insurance carrier | 1.00 | ..... |
| Removal of foreign body from conjunctiva, at office..... | 1.00 | ..... |
| Removal of foreign body from cornea | 1.50 | 1.00 |
| First attention at office—including operative procedure and dressing of ordinary wounds..... | 1.50 | ..... |
| Following first aid, each subsequent treatment at office..... | 1.00 | ..... |

In certain instances specific, definite services are required. It is recognized that these cases demand definite knowledge and often prompt action, therefore the following specific fees are recommended. In respect to subsequent treatment it is considered that the following amounts are maximum amounts which must be earned by house, hospital or office visit charges as set forth elsewhere in this schedule. If such house, hospital or office visit charges do not equal the total allowance suggested below, then only the amount of such charges should be presented.

Specific Service Schedule of Rates

| | Operation Only | Total limit for full Subsequent Treatment |
|--|----------------|---|
| Amputations | | |
| Hip | \$50.00 | \$25.00 |
| Thigh | 35.00 | 15.00 |
| Foot | 35.00 | 15.00 |
| Leg | 25.00 | 15.00 |
| Shoulder joint | 40.00 | 15.00 |
| Arm, forearm or hand..... | 25.00 | 15.00 |
| Metatarsal or metacarpal—one..... | 10.00 | 10.00 |
| Metatarsal or metacarpal—two or more | 15.00 | 10.00 |
| Finger or toe..... | 5.00 | 10.00 |
| Fingers or toes,—two or more..... | 10.00 | 10.00 |
| Ankle joint | 25.00 | 15.00 |
| Knee joint | 35.00 | 15.00 |
| Elbow joint | 25.00 | 15.00 |
| Wrist joint | 25.00 | 15.00 |
| Fractures | | |
| Upper arm | 15.00 | 5.00 |
| Forearm—one bone (shaft)..... | 10.00 | 5.00 |
| Forearm both bones (shaft)..... | 10.00 | 10.00 |
| Forearm—Colles' | 15.00 | 10.00 |
| Lower leg—one bone..... | 10.00 | 10.00 |
| Lower leg—both bones..... | 15.00 | 10.00 |
| Femur | 20.00 | 10.00 |
| Jaw | 10.00 | 10.00 |
| Ribs—one or more..... | 5.00 | 5.00 |

| | | | | | |
|--------------------------------------|-----------|-------|--|----------------|-------|
| Patella | 20.00 | 10.00 | treatment \$5.00; total not to exceed | | |
| Pubic bone | 2.00 | 13.00 | \$25.00. | | |
| Acetabulum | 30.00 | 20.00 | Anthrax—cauterization or excision.... | 10.00 | 15.00 |
| Metatarsal or metacarpal..... | 2.00 | 3.00 | Ligating important arteries (sepa- | | |
| Fingers—one or more..... | 2.00 | 3.00 | rate operation) | 5.00 | 5.00 |
| Toes—one or more..... | 5.00 | 5.00 | Ligating small arteries (separate | | |
| Coccyx | 2.00 | 13.00 | operation) | 3.00 | 2.00 |
| Sacrum | 2.00 | 13.00 | Hernia—reduction by taxis and ap- | | |
| Sternum | 5.00 | 5.00 | plying truss (subsequent treatment | | |
| Spine | 10.00 | 20.00 | none) | 5.00 | ..... |
| Lachrymal bone | 5.00 | 5.00 | Herniotomy | 35.00 | 15.00 |
| Malar bone | 5.00 | 5.00 | Enucleation of eye-ball..... | 25.00 | 15.00 |
| Scapula | 10.00 | 10.00 | Removal of one testicle..... | 10.00 | 5.00 |
| Clavicle | 5.00 | 10.00 | Removal of both testicles..... | 15.00 | 5.00 |
| Nasal bones | 5.00 | 5.00 | Sprains | | |
| Compound fracture | 25% extra | | Shoulder | 2.00 | 3.00 |
| Operations for wiring of bones or | | | Elbow | 2.00 | 3.00 |
| plating | 50% extra | | Wrist | 2.00 | 3.00 |
| Dislocations | | | Hip | 2.00 | 3.00 |
| Shoulder | 5.00 | 10.00 | Knee | 2.00 | 3.00 |
| Elbow | 5.00 | 5.00 | Ankle | 2.00 | 3.00 |
| Wrist | 5.00 | 5.00 | All other joints..... | 1.00 | 2.00 |
| Hip | 10.00 | 15.00 | Special Items | | |
| Knee | 5.00 | 15.00 | Minor operations—repair of small | | |
| Patella | 5.00 | 5.00 | wounds including suturing and | | |
| Ankle | 5.00 | 15.00 | dressing | 2.00 | 3.00 |
| Clavicle | 5.00 | 10.00 | Repair of large wounds requiring ex- | | |
| Fingers—one or more..... | 1.50 | 2.00 | tensive suturing and dressing..... | 3.00 | 4.50 |
| Toes—one or more..... | 2.00 | 3.00 | Abscess—incision | 2.00 | 2.00 |
| Jaw | 3.00 | 2.00 | Laminectomy (special operation).... | 50.00 | 25.00 |
| Ribs—one or more..... | 3.00 | 2.00 | Paracentesis, thoracis or pericardii | | |
| Spine | 15.00 | 10.00 | (special operation) | 10.00 | 5.00 |
| Sternum | 3.00 | 2.00 | Rupture of tendon—large..... | 5.00 | 5.00 |
| Coccyx | 5.00 | 5.00 | Rupture of tendon—small..... | 2.50 | 2.50 |
| Metacarpal—one or more..... | 3.00 | 2.00 | General Items | | |
| Metatarsal—one or more..... | 5.00 | 5.00 | Assisting at operation—major..... | \$10.00 | ..... |
| Carpal—one or more..... | 3.00 | 2.00 | Assisting at operation—minor..... | 2.00 to 5.00 | |
| Tarsal—one or more..... | 5.00 | 5.00 | Examination in lunacy—including | | |
| Scapula | 5.00 | 10.00 | written report and one day's at- | | |
| Pelvis | 5.00 | 5.00 | tendance in court or before com- | | |
| Special Operations | | | missioner | 50.00 | ..... |
| Trephining of Skull..... | 40.00 | 10.00 | Subsequent court or commission at- | | |
| Laparotomy for traumatic peritonitis | 40.00 | 10.00 | tendance—per day | 25.00 | ..... |
| Fixation or suturing of kidney..... | 50.00 | 25.00 | Urinalysis—when specially requested | 2.00 | ..... |
| Laparotomy for rupture or wound of | | | Complete physical examination and | | |
| bladder | 40.00 | 10.00 | report by other than attending | | |
| Laparotomy for rupture or wound | | | physician | 5.00 | ..... |
| of liver | 40.00 | 10.00 | Autopsy—complete with written re- | | |
| Laparotomy for rupture or wound of | | | port | 50.00 | ..... |
| spleen | 40.00 | 10.00 | Autopsy—attending but not perform- | | |
| Laparotomy for rupture or wound of | | | ing | 10.00 | ..... |
| stomach | 40.00 | 10.00 | Microscopical and chemical analysis | | |
| Laparotomy for circumscribed aneur- | | | of organs | 25.00 extra | |
| ism | 40.00 | 10.00 | Testimony in court or before com- | | |
| Trephining bone abscess..... | 5.00 | 5.00 | missioner as to simple fact of in- | | |
| Caries or necrosis—removal of..... | 10.00 | 5.00 | jury | 10.00 | ..... |
| Tracheotomy | 25.00 | 15.00 | Expert testimony—per day..... | 15.00 to 25.00 | |
| Intubation | 5.00 | 5.00 | Testimony at coroner's inquest..... | 5.00 | ..... |
| Rupture of abdominal wall..... | 10.00 | 15.00 | Introducing catheter | 2.00 | ..... |
| Nerve—section or suturing of..... | 5.00 | 5.00 | X-ray picture, including print, of ex- | | |
| Immunizing injection of antitoxin | | | tremities or head..... | 5.00 | ..... |
| for tetanus or hydrophobia.—Each | | | Subsequent pictures, including print | | |
| | | | of extremities or head..... | 3.00 each | |

| | | |
|---|-----------|-------|
| X-ray picture, including print, of trunk | 10.00 | ..... |
| Subsequent pictures, including print of trunk | 5.00 each | |
| General anesthetic-administration of | 5.00 | ..... |
| Local anesthetic-administration of.... | 2.00 | ..... |
| Wassermann test, making of..... | 5.00 | ..... |
| Taking of specimen for..... | 5.00 | ..... |

Concerning Hospital Treatment

For the greatest benefit to employes, and for the security of hospitals and the medical profession, patients should be placed in wards where possible.

General Statements

Cases not specifically covered in this schedule are to be treated on the basis of day and night visits, except where special treatment is necessary. In that event, the facts (if not an emergency case) are to be submitted to the insurance carrier and arrangements made with it for such additional or special treatment.

Treatments shall not exceed fourteen (14) days, as provided by the law, at the expense of the insurance carrier.

These fees have been established with the understanding that they include, in all cases, ordinary dressings and anesthetics, etc., for the proper treatment of each case, and that they will be supplied by the attending physician. It is also understood that the strictest aseptic precautions will be observed in accordance with approved methods of surgery.

It is understood that itemized bills shall be rendered immediately after treatment ceases, or in any event, at the expiration of thirty (30) days from date of injury. Such bills are to be itemized, showing date of each visit, dressing or operation, and charge for same.

Reports relative to condition of injured employes under treatment shall be made when requested, without extra charge.

J. F. HERRICK,
H. C. ESCHBACH,
D. S. FAIRCHILD.

Casualty Insurance Adjusters Ass'n of Iowa.

C. E. BULLOCK, Pres.,
GEORGE A. HODGMAN,
E. A. HOLLENBECK,
C. WOODBRIDGE.

Dr. Roberts of Oskaloosa moved that we accept the recommendation of the committee and that we approve of the plan as outlined. Motion seconded and after considerable discussion Dr. Frantz made a motion to postpone the question until Friday morning. It was seconded by Dr. Treynor.

Dr. Lambert of New York City, one of the authors of the New York Compensation Fee bill, being present, was called upon by the President to discuss this subject.

Dr. Lambert summarized briefly the history of the formation of the New York fee bill, and explained the difficulty in securing adequate compensation for

this kind of work. He particularly emphasized the fact that the adoption of a fee bill tends to become the maximum fee in that locality for that class of service for people who are not under compensation.

J. W. Kime, Fort Dodge, at this time presented the following resolution in relation to this subject:

The Webster County Medical Society at a special meeting adopted the following resolutions:

"First—We are unalterably opposed to the adoption by the Iowa State Medical Society of any fee bill covering industrial conditions.

Second—We are in favor of a revision of the Iowa compensation law so that it will be just and equitable to the employe and the physician.

Third—It is our belief that this can best be accomplished by the state carrying its own industrial insurance.

Fourth—Under the present law we believe the physicians of the state should refuse to treat all serious industrial accidents until a guarantee of adequate compensation is made by the employer."

Dr. Kime also presented the following suggestions at the request of his county society:

"In view of the fact that medical and surgical supplies are excessively high and that all living expenses are high and that every commodity and all other professional services are higher than ever before we think it a very inopportune time to lower medical fees.

The present liability law works no injustice to the slightly injured employe but to the seriously injured or permanently disabled man it is inadequate.

To illustrate. One D. who was earning about \$14.00 a week, which was barely a living wage for himself and wife was injured on the 12th day of February, 1916. The nature and extent of his injury is such that he will be disabled for at least six months and that during the major part of that time he will need the attention of a physician. During the first fourteen days the company paid a reasonable doctor bill and on the fourteenth day discontinued paying the doctor bill and began paying the employee \$6.85 a week on which he is expected to live, support his wife and pay his doctor. Of course he can not do it. You cannot throw up the case.

The present liability law seems to have been framed for the benefit of the insurance companies and a reduction of medical and surgical fees, while it might be admissable if the benefit accrued to the injured employe, is not to be considered when the insurance companies will be the sole beneficiaries."

Motion made and seconded that motion for postponement be amended to read Thursday morning instead of Friday morning.

Motion carried.

The motion as amended to postpone until Thursday morning was put and carried.

Secretary read a communication from the New Jersey Medical Society which was received and placed on file.

"The Medical Society of New Jersey sends greetings to the Iowa State Medical Society, announcing the celebration of our Society's 150th anniversary at

Asbury Park, N. J., June 20-22, 1916. As our's is the oldest state society in the country, we shall observe this occasion with more than our usual enthusiasm.

We are inviting the President of every State Medical Society to attend this anniversary as our guest, representing his Society.

Wishing your Society this year a pleasant and profitable meeting, I am in behalf of our Society,

Yours very cordially,

EDWARD GUION,
Sec. Com. of Arrangements."

Motion made and seconded that the Secretary be instructed to send the congratulations of the Iowa State Medical Society to the New Jersey Medical Society on its attaining its 150th anniversary.

Motion carried.

The Secretary read a communication from Webster County Medical Society which was received and placed on file.

"Whereas: The enactment of the Employers Liability Law has removed from the injured employe a very lucrative source of income.

And Whereas the doctor is the next in line and by reason of this fact malpractice suits are rapidly increasing in number so that at the present time the number of malpractice suits in the state is greater than at any former time.

Therefore be it resolved: That it is the sense of the Webster County Medical Society that the State Medical Society furnish more adequate protection to its members and to that end that the dues of the Society be raised to meet such defense.

And be it further resolved that a copy of this resolution be sent to the various county medical societies for their consideration and co-operation, and to the Journal of the State Society for publication."

Dr. Stockton presented a communication from the Cerro Gordo County Medical Society on the same subject which was received and placed on file.

Dr. DeBey stated that the Sioux County Medical Society was in favor of the Webster county resolution, also Scott, Hardin and Mills county reported in favor of this resolution.

Meeting adjourned until Thursday morning at eight o'clock.

The delegates then met in caucus by congressional districts to select members for the nominating committee which was reported as follows:

First District—W. S. Parks.

Second District—A. W. Bowen.

Third District—J. E. Brinkman.

Fourth District—O. O. Svebakken.

Fifth District—G. E. Crawford.

Sixth District—H. C. Young.

Seventh District—Lewis Schooler.

Eighth District—W. C. Phillips.

Ninth District—V. L. Treynor.

Tenth District—W. W. Beam.

Eleventh District—W. W. Dean.

THURSDAY MORNING MEETING, MAY 11, 1916

Meeting called to order in the ball room of the Blackhawk Hotel by the President, W. B. Small. Roll call showed the presence of seventy members.

The minutes of Wednesday evening session were read and approved.

Dr. J. E. Luckey, chairman of the Committee on Tuberculosis, reported as follows:

REPORT OF THE COMMITTEE ON TUBERCULOSIS

Your Committee on Tuberculosis met at Des Moines on September 20, 1915, with Mr. Charles M. DeForrest, field secretary for the National Association for the Study and Prevention of Tuberculosis at which time all of the committee were present—Dr. Bannister of Ottumwa, Dr. Fuller of Keokuk, Dr. J. E. Luckey of Vinton, Dr. John H. Peck of Des Moines and Dr. Scarborough of Oakdale. It was decided to proceed with the organization of a State Tuberculosis Association in accordance with the report submitted and accepted by this body at its last annual meeting.

Accordingly a meeting was called at Des Moines on October 4, 1915, at which time the Iowa Association for the Prevention of Tuberculosis was organized with Doctor W. W. Pearson of Des Moines as President; Governor George W. Clarke and Dr. W. L. Bierring, as Honorary Vice-Presidents; Dr. John H. Peck, Des Moines, as Secretary and C. H. Stephenson as Treasurer.

This Association has secured the services of Mr. W. F. Clowes as Executive Secretary.

J. E. LUCKEY,
Chairman of Committee.

Dr. Paul E. Gardner, Chairman of the Committee on Health and Public Instruction reported as follows:

REPORT OF COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

The committee on Health and Public Instruction begs to report that interest in public health matters in general and health meetings in particular, have been well maintained during the past year. That various meetings for the education of the general public have been held under the auspices of county medical societies, women's clubs, farmers' institutes, state fair and various educational institutions.

Although the committee does not have personal knowledge of all the meetings that have been held over the state, we feel quite certain that at least 200 meetings have been held.

Special credit is due to the efforts of Dr. Jeanette Throckmorton, a member of this committee, who personally made thirty-one public health addresses in various parts of the state, which has been a great sacrifice on her part for the public good.

There being no members of the Committee on Constitution and By-Laws present, the President appointed the following committee on Constitution and By-Laws: Dr. Fairchild, Dr. Eschbach, Dr. Treynor.

Dr. Henry Albert, Secretary of the Council, read his report which was accepted and placed on file.

REPORT OF COUNCIL

First District—Six counties report 145 members with 213 eligible. They report a total average attendance at meetings of eighty-nine. Five of the counties show an increase of membership and attendance at meetings. One, Henry county, failed to have any meetings during the year, consequently dropped twenty-five members for non-payment of dues. A meeting, however, was recently called at which time the society of that county reorganized, or rather, elected new officers. No report could be obtained from Louisa county.

Second District—Five counties report 189 members with 221 eligible. During the year seven have dropped membership and twenty-two have been admitted. The total average attendance at meetings of the five counties was 103. Two of the counties report good interest; three, fair, and one, poor.

Third District—Nine counties report 245 members with 302 eligible. The average attendance at meetings consisting of all of the societies, was 109. Seventeen dropped membership and thirty were added. Four counties report good interest; three, fair, and two, poor.

Fourth District—Nine counties report 141 members with 212 eligible. The total average attendance at meetings was eighty-five. Three counties report good interest; three, fair, and three, poor.

Fifth District—Six counties report 178 members which is twenty-five less than it was the year before. This will however be partially made up by members paying their dues to date. The membership of Grundy county has been increased by one. Interest is good in most of the counties and especially so in Linn county.

Sixth District—Seven counties report attendance of 158 with 230 eligible to membership. The total average attendance at meetings was eighty-three. Four counties report good interest; two, fair, and one, poor.

Seventh District—Four counties report 243 members with 276 eligible. Total average attendance at meetings was ninety-three. One county reports excellent interest; one, good; one, fair, and one, very poor.

Eighth District—Eleven counties report 161 members with 268 eligible. Total average attendance at meetings was ninety-five. Three counties report good interest; six, fair, and three, poor.

Ninth District—Five counties report 104 members out of 120 eligible. Total average attendance at meetings was fifty-one. One society reports excellent interest; three, fair, and one, poor.

Tenth District—Eleven societies report 174 members with 254 eligible. Total average attendance at meetings is ninety. Reports from two societies, namely, Pocahontas and Crawford, were not received. Two societies report good interest; six, fair, and three, poor.

Eleventh District—Eleven societies report 109 members with 279 eligible. Total average attendance at meetings was seventy-three. Four counties report interest as good; three, fair, and four, poor.

Dr. G. N. Ryan, chairman of the Board of Trustees reported as follows:

TRUSTEES' REPORT

"Three meetings were held in Des Moines during the year. All bills checked up and passed upon. Contract for printing the Journal was re-let to the Welch Printing Company. A better grade of paper was selected and the Journal was enlarged at a cost of \$13.00 for 2500 Journals each issue, above the original cost. This additional cost of the printing of the Journal was more than compensated for in enabling our advertising manager to let more advertising space. Many letters of commendation were received from various advertisers complimenting the editor, Doctor Fairchild, upon the general tone and quality of the Journal and considering it among the first and best medical journals of the country. It is most gratifying to be able to state that the Journal has more than paid the actual expenses."

Under the order of unfinished business, Dr. Roberts' motion that the recommendation of the special committee on Workmen's Compensation be accepted and that we approve of the plan as outlined, which was deferred from yesterday, was taken up.

This motion was discussed by Doctors Roberts, Littig and DeBey.

Dr. Kenefick asked for re-statement of the motion which was given and then asked that the recommendation of the committee be explained again. The President called on Dr. Herrick who restated the recommendation.

After further discussions by several members of the Society it was moved by Dr. Wescott of Cherokee and seconded by Dr. Kenefick of Algona, that the question be laid on the table.

Motion put and carried.

Moved by Dr. Duhigg that the committee be continued for another year with Dr. Kenefick acting in place of Dr. Herrick.

Seconded by Dr. Crowe.

After discussion by Drs. Kime and Sternberg the motion was put and carried.

Dr. Treynor for the Committee on Constitution and By-Laws proposed the following amendment to the Constitution:

"That Sec. 8 of Chapter VIII be amended by inserting the words 'or other legal expenses' after the word 'counsel' in line 19, and by striking out all words after the word 'committee' in line 20 of Sec. 8 of Chapter VIII of the By-Laws.

Your committee recommends that the special assessment of \$1.00 for the Medico-Legal Committee, be continued for another year.

Your committee also recommends that members who have paid for transcripts of evidence in cases

heretofore, be reimbursed for the expense incurred by them in the preparation of said transcript.

Respectfully submitted,
D. F. FAIRCHILD,
H. C. ESCHBACH,
V. L. TREYNOR."

The committee also recommended that the following amendment proposed last year by Dr. Emmert, be not adopted:

"Amendment to Sec. 8, Chapter VIII of the By-Laws:

After the first paragraph ending with 'or to pay the court costs of any suit' the following to be inserted—

"They shall in no case pay more than \$25.00 per diem for legal services rendered by the local attorney and such services shall be limited to one day unless otherwise authorized in writing by the Medico-Legal committee."

The amendment as reported will lie on the table until tomorrow.

Dr. Chas. P. Frantz, chairman of the Finance Committee, reported as follows:

REPORT OF FINANCE COMMITTEE

To the Iowa State Medical Society:

Your Finance Committee has checked over all items of receipts and expenditure, as shown in the Secretary's report and the Treasurer's report, and find that they are correct and in accordance with the stubs of Treasurer's check book.

We commend both officers for careful, painstaking services in this regard.

We recommend, however, that the Treasurer be instructed to arrange with the bank with which he does the Society's banking, so that no items of exchange shall be charged to the account of the Society.

Respectfully submitted,
CHAS. P. FRANTZ,
C. J. SAUNDERS.

Mr. G. A. Hodgman, chairman of the Sub-Committee of the Casualty Insurance Adjusters Association of Iowa, and who acted with the special committee on Workmen's Compensation in preparing their report, was at this time, on motion, invited to address the Society. Mr. Hodgman said:

"Gentlemen of the Iowa State Medical Society: I certainly appreciate this opportunity and the only thing I can wish for in addition would have been to have had an opportunity before the late motion, for I believe that there are considerations which should be borne in mind by your profession before you go to the legislature. Let me say to you, gentlemen, that one of the companies doing a large volume of business in the State of Iowa (we shall mention no names) for every 35c that the injured man received, paid 26c to the doctors. Can you go before the public and say that you are mal-treated in comparison with the injured man? Gentlemen, the average fee paid the doctors by that same company under your

compensation law, which has been running for nearly two years, is \$6.50 which is three times what the medical profession averaged in the State of Iowa before June, 1914. The industrial commissioner has the power by law to determine the fee. Ex-Governor Garst, the first commissioner, had a good many things to do in connection with initiating the law. The law itself is the result of a social agitation of ten years. It represents the efforts of society to take care of its injured men and it is considered to be the best plan which has been found. The first industrial commissioner had all the machinery to install and did not have the opportunity to prepare a schedule. The industrial commissioner who has to pass on the bill must have a yard stick. The yard stick is simply what we measure by and in every case there is an opportunity for a higher bill, if conditions warrant.

Now I am afraid that some of you gentlemen have not understood the report of your special committee, and the committee of the casualty companies. I fear that some (maybe not a large percentage, but some of you) have not carefully considered the report of your committee, and have the idea of a schedule confused with some indefensible schedules which have been in force in the state. You doctors know the schedule to which I refer, and I wish to call your attention to one fact in particular, that this proposed committee schedule is approximately one per cent. higher than the schedule of which I make mention. Further, the doctors who have been working under that indefensible schedule are tied to no obligation by it, can resign their contracts with the issuing company, and have their bills adjusted by the industrial commissioner on a basis of a fair schedule. In other words, I heard no remarks during my visit this morning, nor have I heard remarks from the physicians generally to the effect that they had any idea that a fair schedule would protect them against the indefensible schedule, as it would be. Is it not true that, deep in your feeling over this situation, the situation in Des Moines with reference to a certain hospital matter and a single, indefensible schedule, have caused practically all the difficulty which you have met with and in connection with which you have raised the issue of contract service? Now I want to tell you, as representing the stock companies, that the large stock companies with almost no exceptions, have not made a single medical contract in the State of Iowa since the compensation law went into effect. I have handled approximately 6000 claims under the Iowa compensation act and my company has not a medical contract in the state. You know, and I know, that it is possible for the companies to obtain contract service, and we feel that some consideration ought to be given to our attempts to avoid contract practice. I do not know just how the other companies may have handled it, but my company, when the law went into effect, sent out a circular letter. The gist of the letter was that we did not intend at that time to make any directions as to medical services, that we were willing, until conditions changed, that the wishes of the em-

ploye and the employer, as the employer's policy might dictate, might consult their reasonable preference in the selection of medical attendance. I have a black list with the names of two members of the medical profession in Iowa upon it, and, since I have been defending malpractice actions for sometime in behalf of your profession, I think I know criminal negligence when I see it and that is why these two men are on the list.

Now about the schedule, whether or not this is a fair schedule is something that physicians can answer better than a lawyer. But, kindly bear in mind that in passing on many hundreds and thousands of injury cases in the State of Iowa for our companies prior to and since the institution of workmen's compensation, we are in a pretty fair position to know what the average fee is for a certain service. I doubt, honestly, that any member of your profession in the state has the same opportunity to compare charges and determine an average charge for a certain service, that we have.

Sometime ago I had a little discussion with a doctor in the northwestern part of the state wherein he said that he could not accept certain fees for residence visits, on the basis of this suggested schedule. He reported he could not work for such small fees. He enclosed, with his letter, his bill with his own fee schedule printed on the back, and it was 50 per cent. lower on the identical items than the amounts I was trying to get him to take. These are only occasional cases. The matter of the schedule has been one which I, as a member of the committee for the casualty companies, took up last September with your President, Dr. Small, and later with Industrial Commissioner Funk. Mr. Funk took office about the first of the year, and when the matter was first mentioned to him, we had already taken up the matter with your President. The commissioner suggested that if your Society would take action upon a fair schedule, satisfactory to the insurers, he would be willing to approve the action of the Society. The schedule so approved would then become the yard stick by which the industrial commissioner could measure medical bills submitted for his approval. As we had tried to keep out of contract practice, and, as we had managed to get together with your committee on a very amicable basis, which rested on a foundation schedule considered by those who have studied it as the most scientific and liberal of any, and, when we looked at the percentage which we are paying your members for medical services in Iowa, and compared it with that which is being paid in other states, we felt that a conscientious effort had been made toward a schedule which, since it was better than any other, would be a credit to your profession and your compensation act, a great assistance for the industrial commissioner, and a yard stick not only for his use but for the insurance carriers who pay the bills. You are averaging in the State of Iowa, at present, about 10 per cent more in medical allowance percentage, than your professional brethren in Illinois, and I may further say that on percentage or in proportion, you are averaging at present more than any other state in the

Union. I may say further that not only is that true, but it is true that you have a \$100-two week limit in your law. In Illinois they have an eight weeks time limit and \$200 amount limit, and the Illinois doctors are getting much less than you for similar services.

The statement holds true also with reference to other states, even where there is a vague, discretionary limit both as to time and amount, as against your restricted \$100 two weeks limit.

We had hoped for your co-operation on this fair schedule, not only because of the high percentage you have earned because of our tolerance of the wishes of the injured men, their family physicians, and their employers, but also because of our determination to avoid contract service, and your professional sense of fairness. The indefensible exceptions I have mentioned are not sanctioned by any of the larger stock companies, nor do their representatives belong to the Casualty Insurance Adjusters Association of Iowa. They are no more friends of ours than of yours.

In conclusion, gentlemen, we have, in conjunction with your committee, made a fair and honorable advance against our joint difficulties in the hope that the suggested schedule would avoid much controversy. The attempt, honorably made, has failed by your action, an outcome that we greatly deplore. I thank you, Mr. President, and gentlemen of the Society, for this opportunity of presenting part of the subject."

Under new business, the Secretary called the attention of the House of Delegates to the fact that Dr. Paul W. Van Metre formerly of Atkins, Benton county, is now serving as a missionary in Siam, and reported that on the recommendation of the council his 1915 dues had been remitted, and moved that Dr. Van Metre's dues for 1916 be remitted and that the Journal be sent to him.

Motion seconded and carried unanimously.

Dr. Osborn, the Secretary, read the following communication: "To the House of Delegates of the Iowa State Medical Society: Gentlemen: I herewith present my resignation as Secretary of the Iowa State Medical Society and would like to have it take effect on May 15, 1916. At this time I wish to express to the House of Delegates my appreciation of the great honor you have conferred upon me by twice electing me your Secretary. It is only the stress of personal business which renders it difficult to give as much time to Society matters as I would like to give, that constrains me to present my resignation."

Respectfully submitted,
J. W. OSBORN."

Dr. Schooler moved the acceptance of the Secretary's resignation.

Motion seconded and carried.

Dr. Schooler moved that a rising vote of thanks be tendered Dr. Osborn for his faithful and efficient services as Secretary.

Motion seconded and carried unanimously.

Meeting adjourned until eight o'clock Friday morning.

FRIDAY MORNING MEETING, MAY 12, 1916

Meeting called to order in the ball room of the Blackhawk Hotel, Friday morning by President W. B. Small. Roll call showed the presence of fifty-two members.

The minutes of the Thursday morning session were read and approved.

First order of business was the report of the Committee on Nominations. Dr. W. W. Dean of Sioux City on behalf of the committee made the following nominations:

Officers

President-Elect—J. E. Luckey, Vinton; J. N. Warren, Sioux City; Wm. L. Allen, Davenport.

First Vice-President—Chas. B. Taylor, What Cheer.

Second Vice-President—Dr. C. A. Boice, Washington.

Trustee—J. W. Cokenower, Des Moines.

Secretary, to fill vacancy—Dr. Tom B. Throckmorton, Des Moines.

Council—Third District, W. A. Rohlf, Waverly; Seventh District, Channing G. Smith, Granger; Tenth District, W. W. Beam, Rolfe.

Delegates to A. M. A.—Drs. M. N. Voldeng, Woodward; L. W. Littig, Davenport.

Alternates—Drs. D. H. Bowen, Waukon; J. Lynn Crawford, Cedar Rapids.

Committees

Medico-Legal—Dr. H. B. Jennings, Council Bluffs.

Health and Public Instruction—Dr. Henry Albert, Iowa City.

Constitution and By-Laws—D. C. Brockman, Ottumwa; V. L. Treynor, Council Bluffs; M. J. Kenefick, Algona.

Publication—W. L. Bierring, Des Moines; F. W. Porterfield, Waterloo.

Finance—W. W. Pearson, Des Moines; C. P. Frantz, Burlington; C. J. Saunders, Fort Dodge.

Public Policy and Legislation—T. F. Duhigg, Des Moines; B. L. Eiker, Leon; W. S. Conkling, Des Moines.

Next meeting place, Des Moines, second Wednesday in May, 1917.

The President appointed as tellers Drs. T. M. Throckmorton and Taylor R. Jackson.

The ballot for President-Elect was taken and resulted as follows: Dr. Wm. L. Allen, 3; Dr. J. E. Luckey, 15; Dr. J. N. Warren, 31.

The President announced that Dr. Warren having received the majority of all votes cast was duly elected President-Elect.

It was moved and seconded that the Secretary be instructed to cast the unanimous ballot of the House of Delegates for the remainder of the nominations presented by the Nominating Committee.

Motion adopted unanimously.

The Secretary cast the ballot as instructed, and the President declared the nominees as reported by the nominating committee duly elected to their respective offices.

Under unfinished business various amendments

to the By-Laws were taken up. The amendment proposed last year by Dr. Emmert was re-read as was the one presented yesterday by the Committee on Constitution and By-Laws.

It was moved and seconded that the amendment proposed by Dr. Emmert be rejected. Motion put and carried.

The amendment to Section 8, Chapter VIII, as proposed by the committee on Constitution and By-Laws yesterday, was then taken up and after considerable discussion it was moved, as a substitute for the committee amendment, that the following words be added to the end of Section 8, Chapter VIII:

"This shall not apply to the cost of transcribing evidence in appealed cases."

Motion to substitute was seconded and carried.

Dr. Osborn then moved the adoption of the proposed amendment as changed by the motion to substitute. Motion seconded and carried unanimously.

Dr. W. W. Dean presented the resignation of Dr. Warren, President-Elect, as Trustee, and moved that the resignation be accepted.

Motion seconded and carried.

Then Dr. W. W. Dean, in behalf of the Nominating Committee proposed the name of Dr. T. E. Powers of Clarinda to succeed Dr. Warren.

It was moved and seconded that the Secretary be instructed to cast the ballot of the Society for Dr. Powers to fill the vacancy caused by Dr. Warren's resignation.

Motion carried unanimously and the ballot was so cast and the President declared Dr. Powers duly elected.

Dr. L. W. Littig presented the following resolution, and moved its adoption:

"Be it Resolved; That the Iowa State Medical Society in annual convention in Davenport, May 10, 11 and 12, 1916, most heartily endorse the Trustees of the American Medical Association in their wise, efficient, and altruistic efforts to educate the public in medical matters, and be it

Resolved; That the Iowa State Medical Society compliment and endorse the Journal of the American Medical Association in its vigorous campaign against quacks and quackery in whatever form and wherever found, and be it further

Resolved; That a copy of these resolutions be sent the above named Journal."

The resolution was unanimously adopted.

Dr. Littig then presented this resolution:

"Be it Resolved; That the sum of one hundred and twenty dollars per year be allowed the chairman of the Medico-Legal Committee for clerk hire, stationery, telephone, postage, etc., and that the sum of twenty dollars per year be allowed to each of the other two members of the said committee."

After discussion by several members it was moved that this resolution be laid on the table.

Motion seconded and carried.

Dr. Albert moved that a copy of the President's Address be sent to the Journal of American Medical Association for publication.

Motion seconded and carried unanimously.

Dr. Osborn moved that the recommendation of the Medico-Legal Committee in regard to reimbursing members for transcripts furnished be adopted and that the Trustees be authorized to approve such bills when recommended by the Medico-Legal Committee.

Motion seconded and ruled out of order by the President.

Dr. Duhigg moved that the recommendation of the Committee on Constitution and By-Laws presented yesterday that a special assessment of \$1.00 for the Medico-Legal Fund be levied for next year the same as last year, be amended to read, "the dues of this Society shall be \$5.00 per year, \$3.00 to the Medico-Legal Committee and \$2.00 to the Journal and General Fund."

Motion seconded. After discussion by several of the members motion was put and lost.

It was moved and seconded that the recommendation of the Committee on Constitution and By-Laws, that the special assessment levied last year for 1916 of \$1.00 per member for the Medico-Legal Fund be continued for the year 1917.

Put and carried unanimously.

Moved and seconded that we now adjourn to meet in Des Moines the second Wednesday in May, 1917.

Motion put and carried.

J. W. OSBORN, Secretary.

Minutes of the Council

The Council met at Blackhawk Hotel, Davenport, May 11, 1916. Eight members were present.

The matter pertaining to Dr. C. A. Snyder of the Dubuque County Medical Society was referred to the Councilor of the third district for ruling.

The Council re-elected the following officers for the ensuing year: Paul E. Gardner, New Hampton, chairman; Henry Albert, Iowa City, Secretary.

M. J. KENEFICK, Sec'y Protem.

THE NINETEENTH ANNUAL MEETING OF THE STATE SOCIETY, IOWA MEDICAL WOMEN

The nineteenth annual meeting of the State Society Iowa Medical Women was held in the small ball room of Hotel Blackhawk, Tuesday, May 9, President Dr. Lily Kinnier, of Dubuque, presiding. Meeting was opened at 9:30 A. M. with a business session and reports of committees following which Dr. Mamie A. Coveny, of Clinton, read a paper on Poliomyelitis.

Dr. Kate Mason Hogle, Mt. Vernon, read a paper on Occipito-Posterior Positions.

Autogenous Vaccines was the subject of the paper given by Dr. Jessie Hudson, of Clinton.

A noon luncheon at the Lend-A-Hand Club was enjoyed by those in attendance.

The afternoon meeting was called to order by the President at two o'clock. Address of welcome was

given by Dr. Jennie McCowen, of Davenport, responded to by Dr. Jessie Hudson, of Clinton, following which Dr. Lily Kinnier gave the President's Address.

Dr. Rosina Wistein, of Cedar Rapids, read a paper on Salpingitis—Surgical Treatment and Results.

Dr. Grace Schermerhorn, of Clinton, gave a paper on Nephritis.

Life Insurance Examinations was the subject of the paper given by Dr. Jennie Ghrist, of Ames.

The character of the papers was universally practical and helpful, and the discussion by members general and interesting.

A Meet-Your-Neighbor banquet at Hotel Blackhawk in the evening completed the program.

WARNING

We are advised that a very clever swindle is being worked by a young man calling on physicians in various sections of the country. He is fraudulently soliciting orders and collecting money for subscriptions to medical journals and for medical books published by various firms. He usually represents himself as a student, working his way through college and trying to get a number of votes to help him win a certain contest. He sometimes uses the names of L. D. Grant, H. E. Peters, R. A. Douglas and F. C. Schneider and he usually gives a receipt bearing the heading of some society or association, such as United Students Aid Society; the Alumni Educational League; the American Association for Education, etc.

The description given of this swindler is—young man of the Jewish type, rather slender, with very dark hair combed straight back and shows his teeth plainly when talking.

The whole scheme is a fraud. The societies mentioned do not exist. The idea is to collect money by offering special discounts and prices on medical books and journals and skip with the money.

This young man does not represent W. B. Saunders Company, whose name he frequently uses. He is a fraudulent subscription agent and physicians, generally, should be on the lookout for him.

COMMITTEE OF AMERICAN PHYSICIANS FOR DETERMINING THE CIVILIAN MEDICAL RESOURCES OF THE UNITED STATES

The Presidents of the American Medical Association, the American Surgical Association, the Congress of American Physicians and Surgeons, the Clinical Congress of Surgeons of North America and the American College of Surgeons recently appointed a committee of representative physicians and surgeons for the purpose of aiding the medical department of the army and navy in ascertaining the civilian medical resources of the country. The purpose was not to influence any decision for or against military preparedness but to help provide

information which would aid in making the one humanizing, life-saving department of military service keep pace with other phases of preparedness.

A meeting of the committee was held in Chicago on April 14, at which time officers were elected and an executive committee was chosen.

Dr. W. J. Mayo, of Rochester, was elected chairman and Dr. Frank E. Simpson, of Pittsburgh, was elected secretary. The other members of the executive committee are: Albert VanderVeer, Dr. Fred B. Lund, Dr. Franklin H. Martin, Dr. George E. Brewer, Wm. S. Thayer, J. M. T. Finney, George W. Crile and Robert G. LeConte. A general committee composed of eighteen representative medical men was also appointed who, in conjunction with the members of the executive committee, will attend to such duties as may be deemed necessary. A small group of men in each state and territory in the Union have been selected to co-operate with the general committee in gathering such data and facts as are necessary for a better knowledge of the civilian medical resources of the nation.

The national committee have chosen nine members of the Iowa State Medical Society who are to act as the state committee.

EXAMINATION FOR APPOINTMENT IN THE MEDICAL CORPS OF THE NAVY

The next examination for appointment in the Medical Corps of the Navy will be held on or about August 7, 1916, at Washington, D. C., Boston, Mass., New York, N. Y., Philadelphia, Pa., Norfolk, Va., Charleston, S. C., Great Lakes (Chicago), Ill., Mare Island, Cal., and Puget Sound, Wash.

Applicants must be citizens of the United States and must submit satisfactory evidence of preliminary education and medical education.

The first stage of the examination is for appointment as assistant surgeon in the medical reserve corps, and embraces the following subjects: (A) anatomy, (b) physiology, (c) materia medica and therapeutics, (d) general medicine, (e) general surgery, (f) obstetrics.

The successful candidate then attends the course of instruction at the naval medical school, which will begin on or about October 1, 1916. During this course he receives a salary of \$2,000 per annum, with allowances for quarters, heat, and light, and at the end of the course, if he successfully passes an examination in the subjects taught in the school, he is commissioned an assistant surgeon in the navy to fill a vacancy.

Full information with regard to the physical and professional examinations, with instructions how to submit formal application, may be obtained by addressing the surgeon general of the navy, navy department, Washington, D. C.

W. C. BRAISTED,
Surgeon General, U. S. Navy.

SOCIETY PROCEEDINGS

The Audubon County Medical Society met at Exira, June 15th. Papers were read by Drs. P. E. James of Elkhorn and J. C. Newlon, of Exira. A six o'clock dinner was enjoyed at the Park Hotel.

The Buchanan County Medical Society held its June meeting at the Country Club, Sigourney, the 21st. The program included papers as follows: Paresis, Dr. S. C. Lindsay, of Independence; Care and Feeding of Infants, Dr. A. G. Shellito, of Independence, and Headache, Dr. H. A. Householder, of Winthrop.

The Butler County Medical Society held their annual meeting at the Nevin's Hospital, Greene, May 31. Dr. A. M. Pond, of Dubuque, read two papers, illustrated by lantern slides. The board of county supervisors met with the society and the care of the county poor was discussed.

Officers re-elected for the year are: President, Bruce Ensley, Shell Rock; vice-president, Merle B. Call, Greene; H. N. Bruechert, Parkersburg, secretary and treasurer.

At the June meeting of the Carroll County Medical Society held at Carroll the 6th, papers were read by Drs. L. G. Patty and A. R. Anneberg.

The June meeting of the Chickasaw County Medical Society was held the 27th at Nashua. Chronic Nephritis was the subject of a paper read by Dr. John McDannell. A discussion of this paper and other questions of interest followed.

The Davis County Medical Society held their June meeting at Bloomfield, June 22. On this occasion the society had as its guests Dr. W. E. Alexander of Memphis, Mo. and Dr. J. S. Weingart of Des Moines. After dinner at the Sax the following program was carried out.

President's Address—Dr. H. C. Finch, Pulaski.

Symptoms and Signs of Pneumonia—Dr. W. E. Alexander, Memphis, Mo.

Address—Julius Shaw Weingart, Des Moines.

Unexplained Fevers—Dr. J. L. Saar, Cantril.

Demonstration of Somnoform—Dr. A. W. Gaumer, Bloomfield.

Chronic Bronchitis and Asthma—Dr. J. A. Replogle, Udell.

Difficulties of Labor—Dr. W. L. Downing, Moulton.

Old Time Practice—Dr. E. J. Shelton, Bloomfield.
Volunteer Papers and Cases.

The annual meeting of the Dubuque County Medical Society was held at the Shooting Park, Dubuque, June 29.

On this occasion, the society had as their guests, Drs. Joseph A. Capps, of Chicago; James T. Case of Battle Creek and Jabez N. Jackson, of Kansas

City. Dr. Capps read a paper on the Infectious Origin of Acute Hemorrhagic Ulcers and Erosions of the Stomach; the subject of Dr. Case's paper was Differential Diagnosis of Intra-thoracic Lesions and Dr. Jackson read a paper on Surgery.

Preceding the program a luncheon was enjoyed at the Dubuque Commercial Club. At six o'clock an informal dinner followed by a social session closed a most enjoyable and profitable meeting.

At a meeting of the Floyd County Medical Society, June 14 at Charles City, a committee of three members was appointed with the power to draft suitable resolutions voicing the society's protest against the adoption of the fee bill tabled by the House of Delegates at the last annual session of the Iowa State Medical Society. The committee was further authorized to secure the signatures of all physicians in Floyd County to the resolutions as tendered by the committee.

The Linn County Medical Society, under the presidency of Dr. Frank S. Skinner, held their final meeting for the fiscal year on June 9 at eight o'clock in the Hotel Montrose, Cedar Rapids. It was the good fortune of the society to secure Dr. B. W. Sippy, of Chicago, as the essayist of the evening. Dr. Sippy spoke on the Treatment of Gastric and Duodenal Ulcer, handling his subject in a plain, practical manner. Following the discourse of the invited guest, a buffet luncheon was tendered the society by Drs. L. E. MacLaughlin, W. J. Neuzil, J. J. Murphy and C. T. Gorman.

The officers elected for the ensuing year are as follows: President, C. L. Heald, Cedar Rapids; vice-president, James Knox, Cedar Rapids; secretary—Charles T. Brown, Cedar Rapids; treasurer, Harry M. Ivins, Cedar Rapids.

The Marshall County Medical Society met at the Marshalltown Club, June 13. Dr. Max E. Witte, of the state hospital at Clarinda, read a paper on the General Practitioner and Insanity, and Dr. Fred Moore, of Des Moines, had a paper on Acidosis of Children.

The bi-monthly meeting of the Plymouth County Medical Society was held at the commercial club rooms, Le Mars, June 6. W. J. Brunner, of Akron, read a paper on Some of the Methods of Treating Chronic Nephritis; W. W. Larsen, of Le Mars had a paper on The Value of Blood Examination in General Practice; and G. H. Mammen, of Le Mars, read a paper on Pancreatic Cysts, with Report of a Case. The next meeting of the society will be held August first.

At the meeting of the Polk County Medical Society held June 27 at Des Moines, Dr. Eli Grimes read a paper on Facts and Fallacies of the Tuberculosis Problem which brought out an interesting discussion.

General Anesthesia was the subject of the paper given by Dr. John Russell. Dr. Russell's paper will appear in a future issue of this Journal. It will be well worth your while to read it.

The June meeting of the Poweshiek County Medical Society, was held with Dr. C. D. Busby, Brooklyn, June 6.

Taylor County Medical Society met at Lenox June 13 with a good representation of the society present. The subject for discussion was, Vaccine Therapy. Dr. J. P. Standley, of Platteville, presenting the subject.

IOWA CLINICAL MEDICAL SOCIETY

Feeling the necessity for a more closely allied association between internist and laboratory workers, the Iowa Clinical Medical Society was organized in Des Moines June 6. Men from the larger cities of the state who have shown special aptitude in their respective branches of practice were invited to membership, the number, however, being limited.

The charter officers are as follows: President G. N. Ryan, Des Moines; first vice-president, C. P. Howard, Iowa City; second vice-president, J. W. Shuman, Sioux City; secretary and treasurer, Guthrie McConnell, Waterloo.

The society meetings being quarterly, the next meeting will be held September 2 at Sioux City. At this time clinical cases will be presented and case reports read by the various members.

It is indeed pleasing to note that as medicine progresses, Iowa is ever striving to keep abreast of the times and to maintain her prestige as a State in which scientific and practical medicine is exemplified in the rank and file of her medical cohorts. We are indeed pleased to welcome the advent of this society and sincerely trust its efforts will bear fruition.

ALIENISTS AND NEUROLOGISTS OF THE UNITED STATES

The fifth annual meeting of the Alienists and Neurologists of the United States was held in the LaSalle Hotel, Chicago, June 19 to 23. Under the leadership and direction of public spirited physicians, the Chicago Medical Society has fostered this organization, which primarily had for its object the consideration and discussion of mental diseases in their various phases.

Undoubtedly much good has been accomplished by the society, not only in benefits derived as a result of men mingling together and dispensing knowledge concerning the needs of the various states and territories for the prevention of, and caring for, unfortunate mental direlects, but much good has resulted also in the arousing of public opinion concerning matters pertaining to the welfare of the insane and feeble minded, both intra-and extra-murally.

MARRIAGES

Dr. Frederick Louis Wahrer, of Ft. Madison, to Miss Josephine Jane Gabelman, of Marshalltown, at Marshalltown, June 1.

Dr. J. Robert Wright, to Miss Maycie Worthington, both of Knoxville, June 3.

Dr. Wm. J. Neuzil, to Miss Alice Dobry, both of Cedar Rapids, June 14.

Dr. George Yates, of Des Moines, to Miss Ruth Conger, of Adel, May 30.

Dr. Thomas B. Lacy, to Miss Bertie A. Brinkman, both of Glenwood, at Denver, Colorado, June 23.

Dr. Elmer I. Dunkelberg, to Miss Julia E. Miller, both of Waterloo, June 27.

Dr. Clarence P. Cook, of Des Moines, to Miss Frances P. Hanson, of Paullina, June 28.

Dr. Herbert D. Porterfield, of Red Oak, to Miss Florence Volk, of Long Beach, Calif., at Winterset, June 27.

BIRTHS

Dr. and Mrs. George M. Luckey, of Vinton, June 6, a daughter.

Dr. and Mrs. J. C. Teufel, of Buffalo, June 17, twin sons.

Dr. and Mrs. Sidney D. Martin, of Templeton, June 12, a daughter.

Dr. and Mrs. T. C. Denny, of Des Moines, June 14, a daughter.

Dr. and Mrs. T. A. King, of West Union, June 22, a son.

CHANGES OF LOCATION

Dr. John J. Terrill, of Mt. Vernon, has removed to Cedar Rapids, where he will be associated with Dr. Charles Brown in the practice of his profession.

Dr. G. F. Kelleher, of Elkader, has associated himself with Dr. F. W. Kiesau, of Postville, and will remove to that place.

Dr. E. W. Warner, of Nevada, has removed to West Union, where he will be the interne at the West Union Sanitarium.

MEDICAL NEWS

The Fort Madison Medical Society have again entered into contract with the board of supervisors as physicians for the poor of Lee county.

Dr. and Mrs. J. T. Priestley, of Des Moines, with their grandsons, Joseph and James Priestley, sailed from San Francisco June 28 for Australia and New Zealand, where they will spend the next three months.

Dr. W. L. Bierring, of Des Moines, was elected a member of the federal board of medical examiners to succeed the late Dr. William L. Rodman, of Philadelphia, at the Detroit meeting of the A. M. A.

Dr. Guilford H. Sumner, secretary of the Iowa

State Board of Health, has been confined for some time as a patient in the surgical department of the medical hospital of the State University of Iowa. At present the doctor is reported somewhat improved.

One of the important actions recommended by the council on medical education of the A. M. A. at the Detroit meeting is that, within a year or two, all medical schools recognized as grade A must require from each graduate a year as interne in an approved hospital.

Dr. Gaylord Davis, of Indianola, passed assistant surgeon in the U. S. Navy has returned after three years' service, during which time his duties have taken him through the Philippine Islands, Japan and 1200 miles inland into China. Before entering the navy, Dr. Davis practiced his profession in Des Moines.

DO YOU KNOW THAT

It's worry, not work, which shortens life?

A cold bath every morning is the best complexion remedy?

The death rate from typhoid fever in the United States has been cut in half since 1900?

—United States Public Health Service.

ADRENALIN IN HAY FEVER

Many able therapeutists aver that the best method of treating hay fever is by prophylaxis. The contention is not without substantial foundation, since it is in consonance with the modern trend of preventive medication. Unfortunately, the physician not uncommonly lacks opportunity for the application of prophylactic measures. In a majority of cases the disease has already manifested itself when his services are sought. The situation then calls for prompt, effective treatment. Application of the suprarenal substance in the form of adrenalin chlorid solution or adrenalin inhalant is undoubtedly a wise procedure at this juncture.

While not specifics in the strictest sense, the adrenalin solutions control the hay-fever symptoms effectively and secure for the patient a marked degree of comfort. By reason of their astringent property, they constrict the capillaries, arrest the nasal discharge, minimize cough, headache and other reflex symptoms, and hasten the resumption of natural breathing.

For tropical use in the treatment of hay-fever adrenalin chlorid solution should first be diluted with four to five times its volume of physiologic salt solution; adrenalin inhalant should be diluted with three to four times its volume of olive oil. The solutions are applied in spray form to the nares and pharynx. Any good atomizer adapted to the use of oily or aqueous substances is suited to the purpose.

Parke, Davis & Co.

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No. 8

CARDIAC PAIN*

ALEXANDER LAMBERT, M.D., New York

Mr. Chairman, Ladies and Gentlemen: When your President invited me to deliver an address to you, I accepted with pleasure, both because I appreciated the compliment that you should care to have me—a stranger to most of you—come so far to deliver an address to you, and because it gave me an opportunity to discuss with you a subject that has constantly been forcing itself to my attention with increasing frequency.

Until recently, I think it is safe to say, that the idea of cardiac pain was limited in our minds to attacks of angina pectoris, but there were many pains that really arose in the heart and belonged to the category of true cardiac pain that were designated as pseudo—this or reflex—that or referred to some other diagnosis which led us out of the difficulty of thinking that the heart could frequently give pain and yet the patient not suffer from what we had been taught was angina pectoris. The development of our ideas concerning the pathology of the heart, concerning its method of functioning, and, in fact, concerning the whole subject of what we may call heart disease, has been so great that the ideas of ten and fifteen years ago are inadequate to express the conceptions which we now take for granted that any student in medicine should learn and apply in his daily existence. But in spite of this there still remains the idea that myocardial changes are difficult to diagnose, and that although one hears a great deal of it in pathology, it is clinically difficult to recognize. This does not seem to me to be based on sound reasoning, for if we are justified in drawing deductions from pathology we are certainly justified in making the diagnosis that morbid conditions exist during life which the pathologists find post-mortem. We know that certain morbid conditions of the heart muscles follow certain general diseases and the ingestion of certain poisons, and if the general diseases or other poi-

sonings have been present and the heart shows variation from the normal function, we certainly are justified in our deductions that the cardiac muscle has suffered some morbid change. For instance, we know that in diphtheria we may have, as in all other infectious diseases, the simple albuminous degeneration, or if it be a severe infection, the so-called fatty degeneration. Following any prolonged sepsis or any prolonged intense poisoning, this intense fatty degeneration of the muscle may occur and, in fact, does occur. We know that the chronic alcoholics do show dilated hearts and the broken down equilibrium of their circulation, and we know, postmortem, that we find the fatty degeneration of the cardiac muscle, brown atrophy, and fibroid replacement instead of good muscle tissue. This we know, and we also recognize that when these conditions have been found, the patient has previously shown breathlessness and there has been the familiar breakdown of the circulatory equilibrium, shown by œdema of the legs, visceral congestions and fluid in the serous cavities.

If all these facts are put together, one realizes that the deduction is justified that when breathlessness and a disturbed equilibrium of the circulation are present, there must be myocardial change as the explanation of it. All this may occur with or without any sounds indicating lesions of the valves or murmurs in the heart. Murmurs, it is true, show which valve is injured and how it is injured, whether it permits a leakage backward against the normal stream or whether the valvular opening is constricted and the onward flow is hindered by the stenotic stricture. We know that murmurs only explain valvular lesions but do not explain the cardiac breakdowns. They explain the added burden that a tired or injured heart muscle is carrying, and they explain which chamber of the heart is overburdened with the work, and we thus can clearly conceive why and how the mechanical pump fails in its work. We know also that certain diseases have a predilection to attack certain portions of the heart, that in early childhood sepsis—that is, so-called rheumatism for rheu-

*Address delivered before the Iowa State Medical Society, Davenport, May 10, 1916.

matism is sepsis—attacks the left auriculoventricular opening and the pericardium, and also injures the myocardium. We do not know the reason, but we are forced to accept the fact, that before nine years of age the pericardium rarely escapes in the general infection of the heart from this cause; later, in adolescence, the pericardium frequently escapes and the involvement and damage is usually confined to the left side around the mitral valves. We know also that this sepsis may attack the aortic valves and aorta, but not commonly, and still more rarely does the tricuspid area remain permanently injured.

The aortic area in early adult life is attacked by syphilis so much so that given an aortic lesion in young adult life and the diagnosis of that disease as the exciting factor is most probable. Our experience has also taught us that again in middle life the aortic area is the most frequently attacked, and yet from a different cause, for now the degenerations produced by overwork, by overstrain, by the so-called tension and the wear and tear of life, appear, and the arteriosclerotic changes of an early old age are asserting themselves and coming on. In later life, after fifty, if the aortic area is found involved, the chances are against syphilis and are strongly in favor of arteriosclerosis, and the majority of murmurs credited to the mitral valve in late life are in reality systolic murmurs transmitted down from the aorta and do not belong to the mitral region. From whatever cause the aorta and the aortic ring are damaged, the injury does not cease there but goes on through the arterial system of the heart itself. That is, the coronary arteries arising from the aorta, share in the arteriosclerosis, and again react in increasing the damage to the heart itself. Whether it be by syphilis, which particularly damages the coronary circulation, or by arteriosclerosis of other origin, the damages of which may be confined to the heart and the aortic region, the results produced by starvation to the muscle and the degeneration of that muscle from the lack of nourishment are practically the same, from whatever cause the blood vessels are injured. But when we conceive of acute inflammatory processes following the infectious diseases, or the acute degeneration of the prolonged poisoning such as fatty degeneration, we must also conceive that recovery from these acute conditions is possible because we so frequently see it take place. We realize further, however, that the heart muscle suffering these acute morbid processes may be entirely regenerated, or it may go on to the chronic degenerated condition known as brown atrophy, or there may take place the fibroid replacement which we speak of as

fibroid myocarditis, although it is not in reality a genuine inflammation. It is the old scar tissue from previous lesions; it is the replacement of normal fibers from lack of nourishment and a degeneration from an insufficient blood supply. It is worthy of reflection and emphasis that the fibroid changes come from healed scars of old inflammations or from the slow degeneration of diminishing blood supply and nourishment; moreover, like old scars, it is scattered in areas throughout the myocardium.

Syphilis has its own peculiar lesions in the heart, and particularly that of a genuine increase of the connective tissue due to the specific process, so there is an acute proliferating increase of the connective tissue itself which is due to the luetic poisoning. There is also the formation of many minute gummata scattered throughout the muscles. There are also the changes produced in valves and vessels by the syphilitic arteriosclerosis. Thus this condition produces three specific changes in the cardiac muscle, and damages the heart thereby. This can be actively treated as any other lesion of this same disease in the body, and can be made to heal and the tissues recover from the infection, but it heals by scar tissue for it is the healing of an acute inflammatory process. It leaves, therefore, the heart with an increase of the fibroid tissue within it. These scattered lesions of syphilis not only are scattered through the main mass of muscles but, like other infectious processes, often affect the intrinsic bundles of the original cardiac tube through which the impulse of the cardiac beat travels, and we thus have the various clinical symptoms of the cardiac irregularities which our instruments of precision have only recently been able to differentiate. All these facts are familiar to us all; and when the general diseases are present, as I said, we are justified in believing the lesions exist.

There are two clinical symptoms which, added to the above facts and deductions, give us our clinical knowledge that we are dealing with damaged hearts and hearts which have lost their reserve power of instantaneous and almost universal accommodation; that is, the dyspnoea and the pain. Dyspnoea is the expression of a heart that is overworking; pain is the expression of a heart that is trying to do the impossible. The mere shortness of breath on exertion may be but the expression of a normal heart struggling under great exertion to accomplish its work and in the end doing it. But where dyspnoea turns into breathlessness and where breathlessness comes on in attacks without warning and without exertion, then do we know that the heart is

struggling to carry on even the ordinary duties of everyday life and unable to do it without undue struggle. Pain in the heart ranges from the mere discomfort that a tired heart gives, which cannot under the circumstances go on without some spasm in its tired muscles, up to the terrific rending pain of the most intense angina pectoris, which is one of the severest and most terrifying pains that human beings are called upon to suffer, whose sheer intensity carries with it the conviction of impending dissolution. So strongly is it fastened in the minds of the profession that cardiac pain only occurs in attacks like angina pectoris that it seems to me the majority of instances of lighter grades of pain in the heart are not recognized and are attributed to every other diagnosis save the right one. The most frequent diagnosis of slight degrees of pain is that of rheumatism, and rheumatism, like charity, covers a multitude of mistakes; hence it is easy to place any unknown annoying ache or pain in that convenient category.

Another reason for doing this is, I think, the rather prevalent idea that many pains are reflex pains and hence not real pains; that a pain which comes by reflex action really amounts to nothing, that it is not a pain from the viscus itself which is causing it. There seems to be a widespread conception that as long as any viscus does not have pain in itself, the pain is not of serious import, that radiation of the painful vibrations to distant nerves is half imaginary and of no consequence. We are prone to forget that many of the viscera are insensitive in themselves, and that only through the expression of the sensory nerves of the integument can the morbid processes which produce pain within these viscera be expressed on the outside areas of the body. Mackenzie and Head were the first to bring out these relationships clearly. Mackenzie emphasizes the fact that the so-called reflex pain is the same kind of pain whether it be pain in the arm or pain in the precordium. The pain is exactly the same. It may vary in intensity, but it does not vary in kind, and the text-book description of precordial distress of pain radiating down the left arm is not the only description of cardiac pain or the pain of true angina pectoris. It must be generally realized before long that he who would make the early diagnosis of some visceral lesion must be the one who is able to recognize the true origin of some peculiar reflex pain that is usually cast aside as of no consequence, and that it is possible that these reflex pains are not alone the expression of disturbances of functions but they may be the expression of serious changes of structure in the viscera.

William Harvey, years ago, reported that in the case of the son of the Viscount Montgomery, who had a fistulous opening in the chest wall, over the heart, following fracture of the rib in early childhood, "I found a large open space in the chest into which I could introduce three of my fingers and thumb, and I saw that I was handling the apex of the heart, covered over with a layer of fungus flesh by way of external defense, as commonly happens in old foul ulcers. The youth never knew when we touched his heart except by the sight, or the sensation he had through the external integument." It seems, therefore, that the heart itself is devoid of the power to appreciate tactile sensation. Haller has shown the same fact, for in animals the viscera could be cut or burnt while the animals unconcernedly ate their food. The sympathetic system alone does not seem to have the power of localizing the pain within itself, or expressing the disturbances in the viscera which it supplies, unless through connection with some cerebrospinal nerve apparatus. The three sensitive layers of the abdominal wall are the skin, the muscular layer, and the loose connective tissue layer just outside the peritoneum. Cutting this loose connective tissue layer under cocaine anæsthesia, for the radical cure of hernia, gives intense pain, while cutting and stitching the peritoneum itself causes no painful sensation.

In diseases of the abdominal viscera we all are familiar with the areas of pain, the tenderness in the abdominal wall, the rigidity of its muscles, that these morbid conditions give. In diseases of the thoracic viscera we have in reality the same expressions of sensations from these viscera which are felt as pain, and the reflex pains on the chest wall, of pain in the skin, of hyperalgesia of the muscles, of radiation of pain from the chest down the arms, and even the fixed rigidity of the chest itself, with the intensity of pains which accompany it, are all expressions of varying degrees of injury or morbid processes that are going on in the heart and lungs contained within the thorax. It makes no difference, therefore, whether the pain be reflex or direct, whether it be over the heart itself or be referred to distant areas, often to the wrist or fingers; it is the same pain from the same cardiac mechanism, and it means the same wherever it is felt. Cardiac pains are expressed not in the heart, but in the regions of the body wall surrounding it and adjacent to it, when these adjacent areas are supplied by nerves from the same segments of the spinal cord to which the afferent nerves of the heart go. All pain that may be over the heart does not necessarily mean that it is in the

heart because it is felt over it. All pain accompanying pericarditis is either in the pericardium or from the nerves under the pericardium and supplying it, but not in the heart. The sensations which are felt in the heart itself, such as palpitation, are not pain but are distinct from it. The sensation that accompanies palpitation and the palpitation itself may be intensely distressing because of the feeling of suffocation which accompanies them and because of the feeling of the shock of the beat of the heart against the chest wall, but which is really not pain; it is differentiated from it often by the patients themselves, although they may be intensely frightened by the sensation. They complain of the sense of oppression and suffocation but not of pain.

Another peculiarity of cardiac pain is that it is not intermittent in character, and no matter whether dull or aching, sharp or stabbing, it does not throb and is not variable with the heart beat. We know at present from whence the nerves arise and go to the heart, but when once these nerves are lost in the intricacies of the cardiac plexuses and mingle with the afferent nerves that come from the heart, we cannot differentiate which are these afferent nerves. Ludwig and Cyon have traced some of the afferent nerves through the depressor fibers of the vagus. Eyster and Hooker have shown that the afferent impulses from the aorta and coronary arteries pass upward in the main bundle of the vagus. Moreover, we know that the vagus fibers cause contraction of the coronary arteries, and the sympathetic fibres cause their dilatation. Mackenzie has shown that some cardiac pain is referred to the area supplied by the second and third cervical segments, whose fibres, along with some from the spinal accessory, run down to the heart through the vagus. This would account for the occipital headaches and sudden shooting of pain to the top of the head and tenderness of the sternocleidomastoid and trapezius muscles which are not infrequently present. The distribution of the pain and hyperæsthesia, according to Head, bears a close relation to the chamber of the heart most affected, and particularly to the somatic segment of the embryo to which it corresponds, the auricles being supplied by the fifth, sixth, seventh and eighth thoracic segments, and referring their pain to the lower axilla and shoulder blades, the ventricles by the second, third, fourth, fifth and sixth thoracic segments referring their pain to the chest wall from the second to the seventh rib from the ulna surface of the forearm to the wrist and the inner aspect of the upper arm; the ascending aorta being supplied from the third and fourth cervical

segments and first thoracic, giving tenderness in the neck of the sternomastoid and trapezius muscles, and tenderness and pain at the back of the neck and in the skin down to the collar bone. Pain, therefore, from whatever cause, starting in the heart, goes by whatever channel to some segment from the second, third or fourth cervical, skipping fifth, sixth, seventh and eighth cervical, again reappearing in the first thoracic down to the eighth. The intensity of the beginning disturbing impulse probably has something to do with the intensity of the extent of the spread into the nerves of the corresponding segment. If the impulse is sufficiently strong not only is it expressed as pain, but it is further expressed as hyperæsthesia in the skin and areas of hyperalgesia. It may further excite the motor nerves of that segment and produce the terrific vice-like sensation and cramp-like spasm of rigidity with which the thoracic muscles hold the chest walls, as in a vice, in some of the severe anginal attacks. The counterpart of this muscular reflex, as I have already mentioned, is familiar to you all in the abdominal rigidity in the visceral lesions and visceral pain from the abdominal viscera. The pain usually begins in the anterior surface of the chest and radiates up and outward to the left arm. It may, however, begin in the posterior branches of the nerves in the back and radiate around to the front, or it may go to the right arm instead of the left, or it may go down the left side to the leg or down both legs. The pain may not radiate but be localized as an intensely painful spot in left breast or shoulder or elbow or wrist, or other points more distant from the heart.

If, then, all referred or reflex pain from the heart is the actual pain from this organ, wherever it be situated, is all pain of the same diagnostic value and also of equal prognostic warning? Experience does seem to show that all the pains of cardiac origin in the precordial region or down the arm or in the neck are due to genuine disturbance in the cardiac function or to degeneration of cardiac structure. They are all of equal diagnostic value in showing that the heart is involved and that the myocardium cannot perform the work that is being required of it. However slight the pain may be, whether it be in the precordium or down in the arm, which we believe to arise from cardiac origin, it should be treated as of serious consideration and any pain in these regions should not be regarded as of origin other than of the heart, unless we can conscientiously rule out the probability that it is a cardiac warning. All pain in these regions should be approached from the view that it may be cardiac

pain, not from the point of view that it is anything else, and a differential diagnosis should be made from the point of view to rule out cardiac pain as against all others, rather than to accept the cardiac diagnosis as the last possible one, as is usually done.

These pains can occur from functional poisonings of the heart muscle as well as from serious morbid tissue changes. It is a very noticeable feature how many of the young alcoholics after a debauch complain of precordial pain in the area of the fifth to the seventh rib over the pectoral muscle. Often this muscle is painful; this remains for a few days and then passes off. It seems as if the cardiac muscle had been functionally poisoned and was aching even when the patient was quiet in bed.

Tobacco poisoning is a very common cause of cardiac pain and one that is very seldom recognized as such. Most men smoke; most men are convinced that smoking does them no harm; hence, they are equally convinced that smoking cannot possibly harm any one else. One recoils naturally from the idea that if tobacco gives cardiac pain in the patient, it may some day give cardiac pain in the doctor.

The early pains from tobacco poisoning are those of a sharp precordial pain on exertion, and it is a noticeable feature in the smoker that he acquires dyspnoea on exertion earlier than he did formerly, before he smoked. True, age may have something to do with increasing breathlessness even in the smoker, but it is a noticeable thing in young men in training, that the use of tobacco injures their wind, which is equivalent to saying that it produces a dyspnoea on exertion which they lose when they cease smoking. True it is, that those living an outdoor life can burn up this poison and excrete it with less injury than those living a sedentary existence, but there is no question but that it affects them all. The severer pains of tobacco angina cannot be differentiated from those of other forms of angina, and the results may be the same from the tobacco as from the more serious lesions of arteriosclerosis, for I have in my personal experience had three patients drop dead from tobacco angina.

In a heart whose coronaries are already arteriosclerotic and whose muscle already has a fibroid degeneration, tobacco increases the tendency to anginal attacks and increases the dangers of angina from other causes. Of the cardiac poisons it is much more dangerous than alcohol, and these two are the most dangerous poisons of everyday life. The heart, however, that is poisoned functionally by tobacco, can recover and be a very useful, active heart for years to come,

provided that its owner is wise enough to cease poisoning it.

Pain occurs chiefly in the hearts that are afflicted with changes in their vascular system. It therefore naturally occurs more often in the hearts which contain aortic murmurs rather than those containing the mitral murmurs, although as a matter of fact it is not infrequent in the severe cases of mitral stenosis. This may seem a contradictory statement, but it is in reality logical from our conception that pain follows the inability of the muscles to perform their function, whether from strain or sudden lack of nourishment. Mitral stenosis is almost entirely confined to lesions following sepsis or rheumatism. The ordinary rheumatic lesions of the valves are acute lesions producing valvular scars which heal, and although they remain permanent, do not progress in their destruction; but mitral stenosis, in the majority of cases, is the subacute or chronic inflammation around the auriculoventricular ring and is an inflammation of the base of the valves and the muscles surrounding this ring. It is produced by a chronic and persistent inflammation which, though it may progress slowly, is as a rule a progressive lesion and steadily and persistently closes the mitral opening. The strain on the muscles of the left auricle and the muscles of the right side of the heart are correspondingly greater and are increasingly greater than in the lesions of mitral regurgitation. It soon becomes impossible for the left auricle to empty itself with the stenosis at all marked, when any strain is put upon the heart, causing an increase in the number of beats. In mitral stenosis any exertion rapidly produces breathlessness and the over-distended heart soon causes such a spasm in the muscle that it produces pain.

Even though the blood may rush back against the stream and impede its action from the auricle in the mitral regurgitation, the auricle when it does contract, empties itself easily through the normal opening and does not suffer the same intense distension and strain of muscle that is produced in the stenotic lesion. Dilated hearts may give pain when called upon for extra exertion, and this again is due to the inability of the myocardium to do the work which it is constantly called upon to perform.

Rarely, unless the heart is dilated, do we find patients complaining of cardiac pain who are suffering from the various acute diseases of the infectious group producing the acute forms of myocarditis. The prolonged intoxications of morphine or the cachexias of chronic diseases, as tuberculosis or slowly growing cancer; quietly progressing old age without pronounced arterial changes producing the chronic myocardial de-

generations of brown atrophy and fibroid replacement, do not seem to produce conditions which cause pain in the heart. It is not, therefore, the myocardial changes alone, either acute or chronic, which are primarily responsible for the pain. But if added to the myocardial changes there is degeneration of the coronary arteries from infectious disease, old age, or from whatever other cause, then is pain liable to be a symptom. Myocardial changes, therefore, acute and chronic, occur without vascular degeneration, but vascular degenerations do not occur without producing morbid changes in the myocardium. Hence the deduction is justified that when cardiac pain is present there is some form of vascular change present in the coronary arteries which is preventing the proper functioning of the cardiac muscles. When once coronary arteriosclerosis is present, exertion is not the only factor which produces pain. Hearts thus damaged will react intensely to change in posture of the body and frequently the crowding up of the diaphragm from gas in the stomach beneath, will bring on intense pain. Physical position and physical poisons are not the only causes of pain when once the heart is liable to this symptom. Intense emotions of anger, fear or joy, may kill through this mechanism that produces cardiac pain. From this it is clear that the diagnostic value of recognizing cardiac pain as such is very great and conversely the symptom of cardiac pain is of great value as showing that the cardiac circulation has begun to show the wear and tear of life from disease or old age.

Pain from a prognostic point of view, is, however, of the greatest importance in its variation of intensity and position. As has been pointed out by Head, the painful area on the body gives a clue to the region of the heart most affected. Simple, moderate precordial pain, without hyperesthesia and without hyperalgesia, seems to occur in milder forms of myocardial lesions. As soon, however, as there is hyperesthesia in the skin, following a pain, or there is hyperalgesia of the muscles, the pain and the prognosis of that pain are of serious import. Pains may shoot from the precordium down the left arm or over to the right arm in a sudden stabbing pain, and leave no tenderness in skin or muscles and be of no more serious import than the precordial pain which leaves no trace behind. Pain that is not accompanied with dyspnoea on exertion, or is not accompanied with breathlessness, is not as serious as pain which occurs with dyspnoea on exertion or pain that occurs simultaneously with breathlessness. But when the heart produces breathlessness and pain without apparent exertion or sufficient reason, it is always of most serious import no matter how slight the pain may

be or where situated. Some of the severest attacks of angina that I have ever seen, have not shown a wide extent of pain surface on the body. I have seen patients cry and moan with agony with the pain located only in the wrist. I have seen it where the pain gave the most intense agony only up the sternomastoid muscles or in the mastoid insertion of these muscles, and in the trapezius. Another patient I have shows the most severe attacks of pain shooting up the occipital nerve from the neck to the top of the head.

The advance of the knowledge of the heart in recent years has been through instruments of precision, and the knowledge thus gained has added chiefly to our knowledge of the intrinsic activity of the heart itself and how this is produced. That is, through these instruments we have learned from whence starts the heart beat, through what tracts it is conducted, and what are the various irregularities of the transmission of this cardiac impulse. Variations both in rate of rhythmical contraction of the auricles and the ventricles and of the left and right sides of the heart, and also variations in the conduction of the impulse from auricle to ventricle and the transmission of this impulse to both left and right ventricles. We have thus added much to our knowledge, particularly of the physiology of the heart, and much also of the pathology. There remains yet to ascertain and measure accurately in a damaged heart how much there rests still of reserve power to go on in the cardiac muscles. This knowledge we have not yet acquired, nor do we know at present how we may acquire it. We are justified in believing that the diseases from which the human being has suffered damaged his heart, and we know the manner in which it so damages it. We are justified in our deduction that these exist during life, and we may, with our ear, estimate somewhat of the damage done to the muscle, and we may estimate much of the extra burdens that damaged valves are throwing upon the already injured myocardium. We are still thrown back upon our observation and experience in judging what effect the exertion of the body produces upon the heart and in judging what strains are safe to put upon this organ. The estimate of cardiac reserve is still best judged by the amount of breathlessness and pain that the heart exhibits on exertion or without exertion. Cardiac pain is always like a warning finger pointing to danger. If the warnings are heeded in time, the reward may be many years of healthy life, but if the warnings go unheeded, it invariably leads to disaster. The more pronounced the warning, the greater the need to instant heed. Unfortunately, sometimes, with minor warnings unheeded, an emphatic warning and a final disaster occur together.

TUMORS OF THE HYPOPHYSIS CEREBRI*

With Report of Case

C. E. RUTH, M.D., F.A.C.S., Des Moines

The comparatively small number of cases reported, difficulties in diagnosis, and the variety of operative procedures used in dealing with tumors of the hypophysis, seem to justify reporting the following:

Mr. H. E. G.—Aged thirty-eight years, white, American, was born in Iowa and reared to manhood in central Missouri. Served one year in the United States Army during the Spanish-American War, and has since resided in Cuba and Porto Rico where he was engaged for seven years in agriculture and the last ten years in various commercial enterprises.

Family History—Father living, age sixty-five, good health. Mother died at the age of forty-eight years of acute gastritis. Three brothers living and in good health, one brother died of scarlet fever at four years of age and one sister died of spinal meningitis at seven years of age. Paternal grandfather living, age between eighty-five and ninety years. Paternal grandmother died of blood poisoning. Maternal grandfather died at the age of seventy-six years of "grippe," and maternal grandmother died at the age of seventy years, cause unknown. No consanguinity, no other case of acromegaly in family, no weakness in family.

Personal History—After light attack of scarlet fever at six years of age he remained frail until fourteen years old. Had measles without sequelæ. Began to grow more rapidly after fourteen years of age. Had first terrific headache at ten years of age and had to leave school; the following day had some indigestion. At twelve or thirteen years of age was rendered unconscious for two hours by fall from hammock. Eyes were weak after attack of typhoid fever at the age of seventeen years. First wore glasses at eighteen years of age, but they were discarded at time of enlistment as eyes were then pronounced good. Was rolled on by a horse and his back trampled upon while in the U. S. service. Was unconscious for a day and in the hospital a week; blindness followed except on looking down, but sight gradually returned in two or three days. He had grammar school education, and had entered college when taken with typhoid fever.

At the age of twenty-one years, he enlisted for the Spanish-American War in the 7th United States Cavalry, and served as a private in what was known as the "chancery troop." The latter part of his service was in Cuba.

At the time of his enlistment he was apparently normal in every way save that he was slender, with noticeably small hands and feet. He measured 5 ft. 4½ inches in height and weighed 125 pounds. After

his discharge from the army he remained in Cuba and engaged in agriculture. He married in 1904, and in 1906 he took up his residence in Porto Rico, where he has since made his home.

About 1899 he noticed that his hands and feet were becoming larger than formerly, with a tendency to clubbing of the finger tips. His weight gradually increased from 125 pounds in 1898 to 190 pounds in 1911. He gained in height until thirty years of age at which time he measured 5 ft. 11 inches as against 5 ft. 4½ inches at twenty-one years of age, according to the government record made at that time.

He suffered from malarial infection almost constantly from 1899 to 1911. Headaches came on soon after his fall from the horse in 1898 and soon became constant, though having exacerbations of such intensity as to incapacitate him at times for some hours to a day or two.

Habits—Appetite good, bowels slightly constipated, sleep lost at times on account of headache. Kidneys secrete normal amount in day time, urinates probably once at night. Coffee daily, alcohol occasional drink, never on a spree. Negative venereal history.

Present Illness—Four years ago he noticed when suddenly arising from reclining position that he would at times have a sharp pain in the head with dizziness, lasting for a very short time. Has had to use eyes to a slight degree to aid equilibrium.

For the past year he has noticed that two or three nights a week he would be awakened on account of pain in eyes and back of head and neck. Change of position would usually afford relief and sleep would be resumed. Has a severe headache on awakening in the morning, lasting on an average of one-half hour.

In Porto Rico, where he has resided for the past ten years, he was engaged in various commercial enterprises requiring more than ordinary mental effort and application. He was able to direct the business with unabated sagacity until early in 1915, when he began to have attacks of hemianopia (bitemporal) of short duration. Vision began to fail in the left eye, the constant headaches became more intense with the exacerbations so severe as to be almost unbearable. The solving of business problems and intricacies became progressively more difficult, physical effort was made with less and less inclination and agility. A peculiar bronzing of the skin of the face was very pronounced and accompanied by a roughness, coarseness, and moderate thickening, thought to be due to his malarial intoxication, but in reality quite a constant accompaniment of typical acromegaly regardless of climate or other complications.

Examination—Station O, gait O. Pupils equal and respond to light, ocular movements full and equal, no nystagmus, no diplopia. No history of anosmia or parosmia. Hearing normal. Thyroid small, no cervical glandular enlargement. Deep reflexes intact; abdominal present, cremasteric present, normal plantar flexion. Heart O, abdomen O. Lower incisors pro-

*Read before the Sixty-fifth Annual Session, Iowa State Medical Society, Davenport, May 10, 11, 12, 1916.

trude past the upper incisors. This has occurred during the past five years. The malar bones are massive and the cheeks are sunken.

Measurements—Around skull above ears and on level with eye brows $61\frac{1}{2}$ cm. Glabella toinion 38 cm.; glabella to tip of nose 6 cm.; around chest at nipple line 101 cm.; tip of acromian process to index finger 73 cm. right and left; around largest part of hand, left $25\frac{1}{2}$ cm.; right $26\frac{1}{2}$ cm.

been free from attacks of hemianopia for some weeks.

At times he found that eating a very heavy meal would afford some relief from the headaches.

Operation—Under treatment for two months with thyroid extract and potassium iodide no marked relief or change in his condition was noticed, and operation was decided upon.

The pronounced extension of the tumor above the

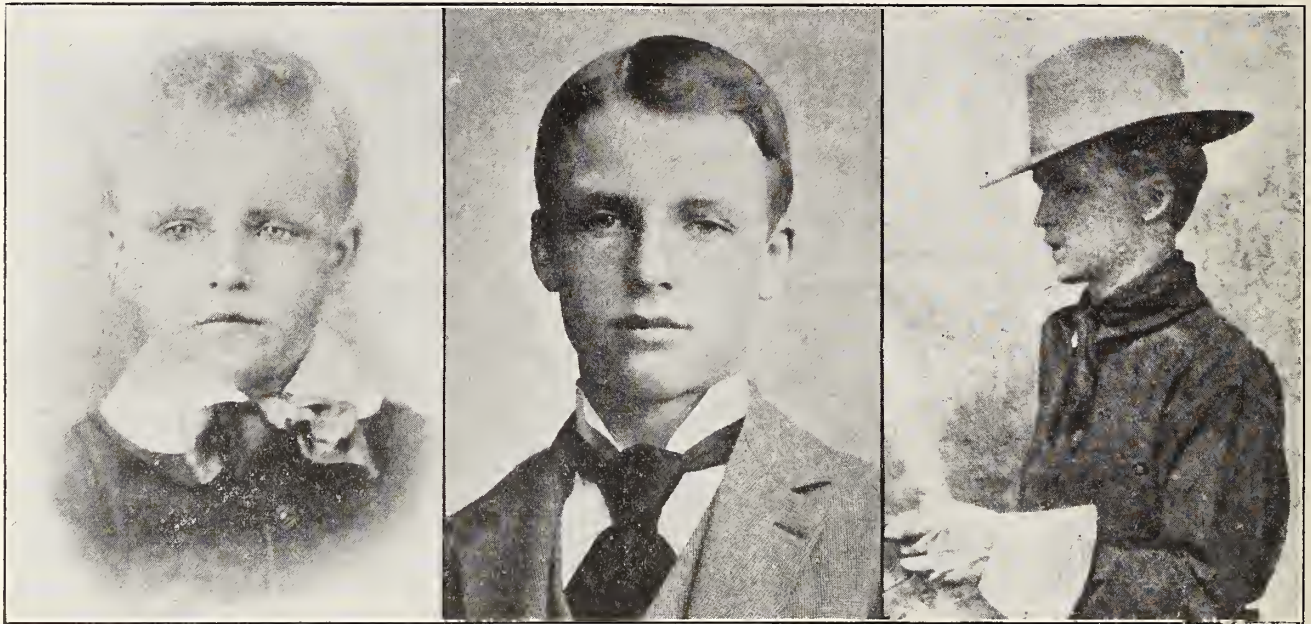


FIG. 1—Appearance at 5 years of age.

FIG. 2—Appearance at 16 years of age.

FIG. 3—Appearance at 21 years of age. Note the fineness of features. Height 5 ft., $4\frac{1}{2}$ inches; body weight, 125 pounds.

X-ray plates showed the sella-tursica deepened and greatly widened from before backward. The posterior clinoid process was long and attenuated, and was 3 cm. posterior to the anterior clinoid processes; the sella was $2\frac{1}{2}$ cm. deep. A dark ovoid shadow at least 5 cm. antero-posteriorly and 4 cm. vertically extended nearly 2 cm. posteriorly to the posterior clinoid process and arose 1 cm. above the level of the processes.

Dr. Burcham, who made the skiagrams, declared at once that it was a cyst.

His temperature was 98.5 F.; pulse 72; blood-pressure, 120.; blood and urine negative, Wassermann negative, all organs and functions seemed normal save the eyes.

The condition of the eyes is best shown by the charts which were made by Dr. W. W. Pearson of Des Moines, except the last one which was made by Dr. Levis Babcock of San Juan, Porto Rico. To Dr. Babcock belongs the credit of making the first diagnosis of this case from the eye findings and general symptomatology.

At the time of his presentation to me for examination September 15, 1915, vision was still normal in the right eye, but was only 15/30 in the left eye. The left eye also showed great restriction of the color field.

At the time of presentation for examination he had

clinoid processes, making the tumor accessible from above, caused us to choose the trans-frontal route.

Eiselberg's report of twenty-one cases with four deaths from meningitis by the Schloffer high trans-sphenoidal route, seemed too high a mortality to justify our attempting the operation by a route impossible of perfect asepsis.

The difficulties of the operation by the trans-frontal route were decidedly increased by the large size of the frontal sinuses. The left sinus being a little smaller than the right allowed of more operative room on the left and this side was therefore chosen as the safest line of approach.

An incision starting in the center at the glabella passed outward in the left eyebrow well beyond the external angular process, another extended within the hairline from the center in front three and one-half inches to the left. These incisions were joined at their inner end by a vertical incision approximately in the median line. A small trephine disc was removed at each end of the upper hairline cut, these were joined by a Gigli saw cut on a heavy upward bevel to prevent inward displacement when the proposed bone flap was replaced. The dura was next carefully separated ahead of the rongeur from the inner trephine opening directly downward as close as consistent to the superior longitudinal sinus until the X-ray outlines and the periosteal elevator

gave warning of the proximity of the frontal sinuses. The vertical ronguer track was then made to round the frontal sinus to the left as close as possible without entering until the supra-orbital ridge was reached.

A thin chisel was used to cut the supra-orbital ridge on a heavy slant as close to the outer limit of the frontal sinus as possible without entering it. The chisel was then made to slant in exactly the

away as far back as the optic foramen without at any point opening the dura or lacerating the periorbitum. The dura was next separated from the horizontal plate of the ethmoid so as to expose both anterior clinoid processes.

The dura was made tense by careful traction directly upward and a transverse opening was made $\frac{1}{2}$ inch in length between the anterior clinoid processes directly into the cyst which discharged approx-

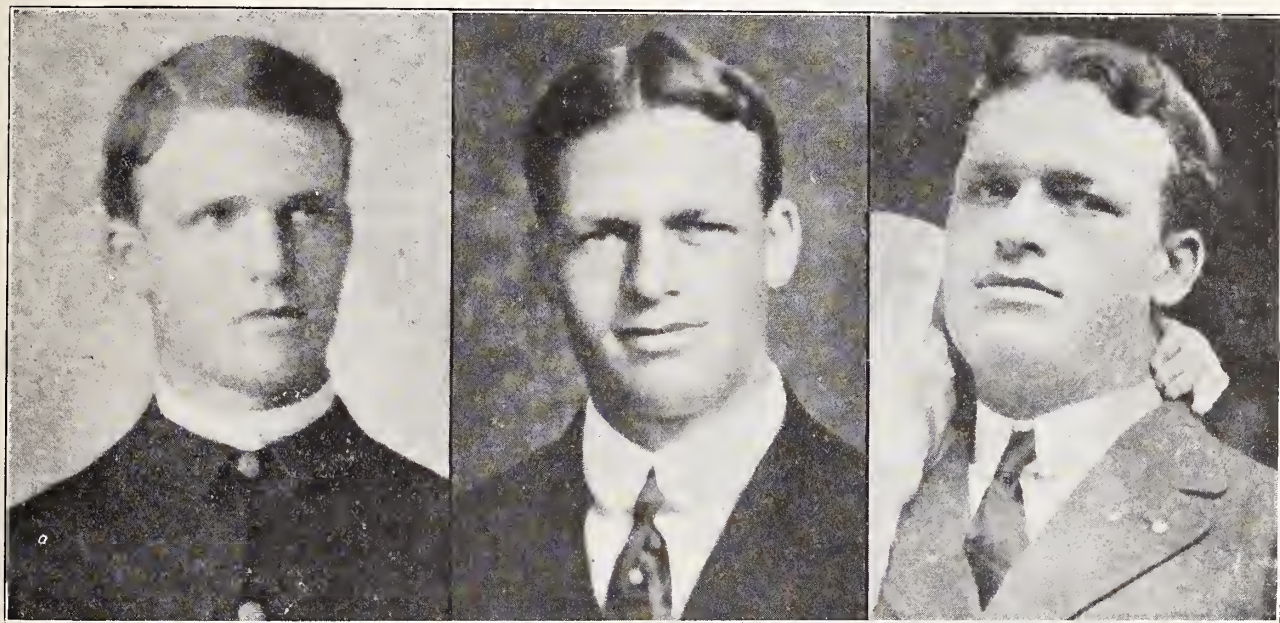


FIG. 4—Appearance at 22 years of age. Note the lengthening of face. Headaches beginning to occur.

FIG. 5—Appearance at 27 years of age. Stature considerably increased. Headaches more intense.

FIG. 6—Appearance at 31 years of age. Note the well-marked acromegalic expression. Height 5 ft., 11 inches; cephalalgia severe, with marked exacerbations.

opposite direction at the extreme outer angle of the supra-orbital ridge and driven through so that when the bone was replaced it must fit without the possibility of inward displacement.

The pedicle of the bone flap was weakened by a chisel stroke at the upper and lower margin of its base to make it break easier, and the supra-orbital plate was broken from below with a chisel as close as possible behind the supra-orbital ridge and the entire tegumentary and osseous flap turned outward in one piece, including all the supra-orbital ridge beyond the frontal sinus.

The pericranium and periosteum were always carefully separated from the bone and pushed out of the way of the ronguer and chisel as much as possible.

The small slightly curved elevator used in submucous septal resections worked well in separating the dura and periosteum from the bone and detecting recession of the inner table indicating the frontal sinus limits.

The deflected tegumentary and bone flap was carefully wrapped with moist warm gauze and secured in place so as to prevent injury and infection. It would however, always be better to apply rubber dam first and gauze over the rubber. The exposed dura bulged and was almost pulseless.

The periosteum and dura were carefully separated from the supra-orbital plate and the bone gnawed

immediately one ounce of clear fluid at once. This was followed by immediate relief of the intra-cranial tension and by regular normal pulsation of the dura mater.

While the retractor was in position the gap through the dura into the cyst was $\frac{3}{16}$ of an inch in width.

The operative difficulties encountered were: **First**—the result of making the bony flap $\frac{3}{4}$ of an inch narrower than it should have been, making upward displacement of the brain difficult because of the heavy intra-cranial tension and slight room. (At this stage of the operation however, a lumbar puncture could have been done after the method of Hener, and the head tilted back to allow the brain to fall away by gravity. When doing or considering spinal puncture in cases presenting marked dilatation of the ventricles, the possibility of the medulla being driven downward and producing fatal compression of the respiratory center must not be forgotten.)

Second—The most notable difficulty resulted from the heavy obliquity in the approach to the median line between the anterior clinoid processes, owing to the large size of the frontal sinuses and correspondingly narrow space through which to work at the outer part of the supra-orbital arch.

Third—The lack of light was overcome by the use

of a very small electric lamp on the margin of the wound.

Fourth—Hemorrhage, while not at all severe, was a little annoying until the position of the head was changed so that a downhill drainage was secured and

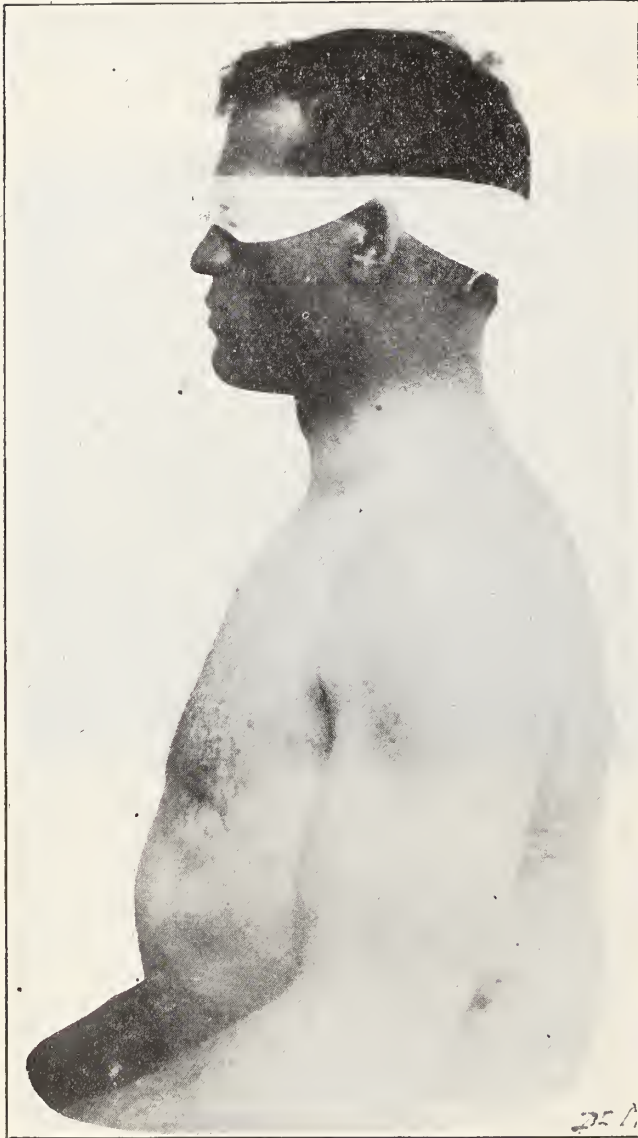


FIG. 7—Appearance at 38 years of age. The bronzing of the skin of the face and neck, the massiveness of the trunk, and the prominence of the sternal articulation are to be noticed. Photo by Dr. T. B. Throckmorton.

thus obviated the need for frequent interruptions of the work for sponging.

No ronguered bone or trephine discs were replaced. The bone removed by ronguer or trephine should probably be replaced in the majority of cases. Some operators report necrosis of 40 per cent. of bone replaced. Other workers replace the bone in every clean case and claim never to have necrosis.

Whether the bone is replaced then or not should evidently have a large personal equation, and in the cases where loss of the bone would produce marked deformity, the bone should be replaced, except in those cases where the surgeon's lack of aseptic skill makes replacement dangerous or in the surgeon's

judgment there could not enough good result from replacement to justify the extra time and the added burden in repair.

The flap of skull and integument was secured in place only by scalp sutures of silk and silkworm gut. His temperature reached 102 F. on the second day, pulse 110. Otherwise recovery was without incident.

Seventeen days after operation, vision had improved in the left eye to 20/30 and there was pronounced gain in the color field. Eight weeks after operation, the vision of the left eye was 19/21 and the color field was almost restored, as indicated by the charts. Headaches were practically gone, no signs of hemianopia had been noted, ease of mental effort had returned with loss of the old drowsiness and physical sluggishness.

The removal of the vertical portion with the supra-orbital ridge in a single piece attached to the scalp, is certainly an improvement over the entire separation of the supra-orbital ridge from all vascular connections.

I believe it better to turn the frontal flap outward



FIG. 8—Appearance of the head, trunk and upper extremities as viewed anteriorly. Photo by Dr. T. B. Throckmorton.

rather than inward, because its blood supply is excellent while a flap turned inward is but feebly supplied with blood.

Two months after operation decided improvement

was noted in the facial contour and expression. The continuance or permanence of the improvement can only be determined by the lapse of time.

Simple drainage of the cyst in this manner must, by passing through the subarachnoid and subdural spaces, give nearly the same possibility or probability of permanent patency of the drainage opening as follows tapping through the corpus callosum for relief of intra-ventricular pressure following obstruction of the iter.

Five months after the operation he noted return of sensation in the reflected flap, showing regeneration of the supra-orbital nerve and that its proximal end had found and united to its distal end.

He is working twelve hours a day on the average, not stopping more than ten minutes for lunch, and he says that he can dispatch more mental work in a given time than he has been able to do in two years. His weight is 196 to 198 pounds.

Facial expression and outline is unquestionably improved, the skin of the face is smoother and less bronzed. The hands are losing their puffy appearance.

Frazier says that he has found glandular feeding of value in but a few of these cases, and he advocates it with hesitation for fear its use may cause too long delay of operative interference.

He considers that the symptoms due to increase in general pressure, *headache and ocular disturbances*, form the principal indication for surgical intervention.

The fact that acromegaly is often a self limited disease, that pituitary tumors are often benign-



FIG. 9—Hands showing typical acromegalic changes. So-called "spade hand." Photo by Dr. T. B. Throckmorton.

nant, that the malignant ones are not virulently so, argues in favor of conservatism.

Temporal decompression has not yielded as favorable results as draining the ventricles through the corpus callosum in the cases of associated hydrocephalus.

Frazier seems to consider that no operative

plan can be expected to secure relief from the subjective disturbances of intra-cranial tension which leaves the capsule of the enlarged gland intact.

Von Eiselberg's last report of twenty-one cases with four deaths from meningitis, all done



FIG. 10—Showing enlargement of osseous structures of right hand. Skiagram taken by Dr. T. A. Burcham.

by the Schloffer method, should not encourage the amateur to undertake the operation by this route if the X-ray indicated that the hypophysis was accessible by the trans-frontal route. While the trans-frontal route is a little tedious, it can be safely carried out by any one accustomed to doing brain surgery with no fear of sepsis, and the result should be good in cases suitable for operation by this route.

Small growths confined to a deep wide sella must be approached from below, because they are almost inaccessible from above.

Ability to determine before operation that the growth is cystic as well as the outlines of the sella, is a long stride toward solving the problems of hypophysis surgery.

In two of Frazier's cases, dilatation of the ven-

tricles was a conspicuous feature, and in one of these, callosal puncture relieved the headache and arrested the optic atrophy. The condition was recognized before operation by atrophy of the

we have used hexamethylenamin as a safeguard against meningitis, and so far have not had this complication except in a case of enormous cerebral abscess.

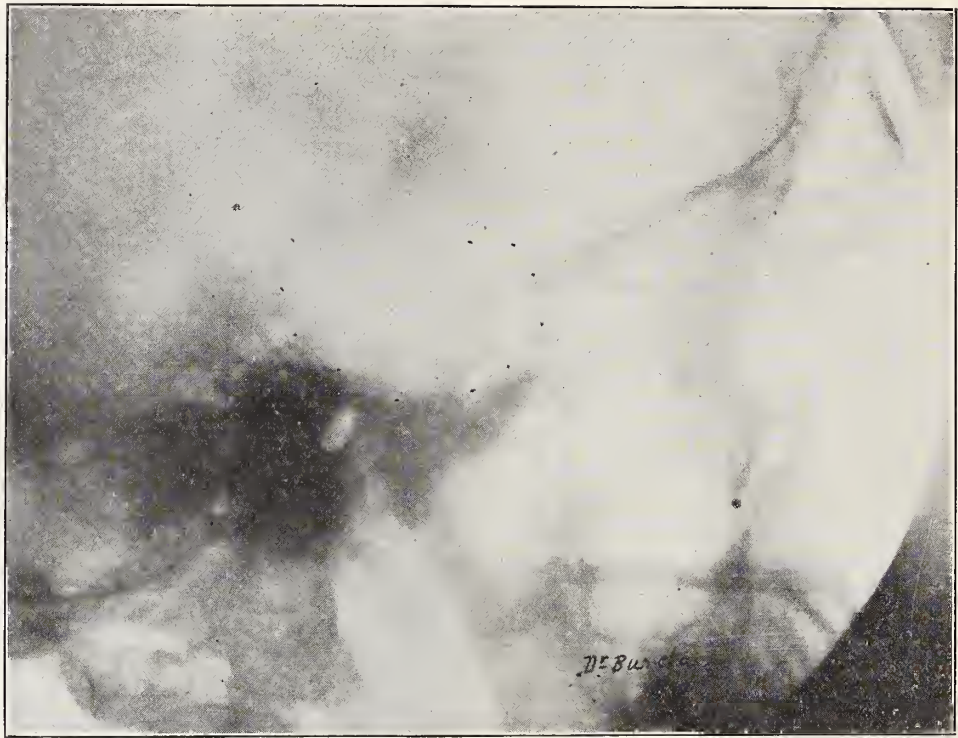


FIG. 11.—Skiagram of skull. The dots indicate the outline of the tumor. The anterior and posterior clinoid processes are to be seen well within the circle. The posterior clinoid process is long and attenuated. The sella tursica is greatly deepened and widened from before backward. Skiagram by Dr. T. A. Burcham.

inner table and flattening of the convolutions, as revealed by röntgenogram.

The improvement made by Cushing in what might well be called the submucous *trans-sphenoidal* method, gives the safest means so far de-

According to Cushing the relation of hyperthyroidism to Grave's disease, hypo-thyroidism to Gull's myxœdema in the adult, and cretinism in its childhood manifestations, has become sufficiently clear for a tolerable working basis in

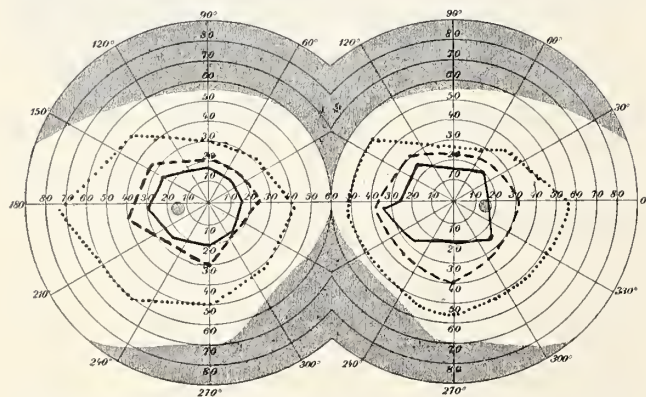


FIG. 12.—Chart showing appearance of color fields on Sept. 9, 1915. Dots represent the blue; dashes represent the red, and lines represent the green color fields, respectively. O. V. D. 16/13 with correction; O. V. S. 16/40 without correction, with correction 16/24. Form fields normal. Prior to operation. Tests made by Dr. W. W. Pearson.

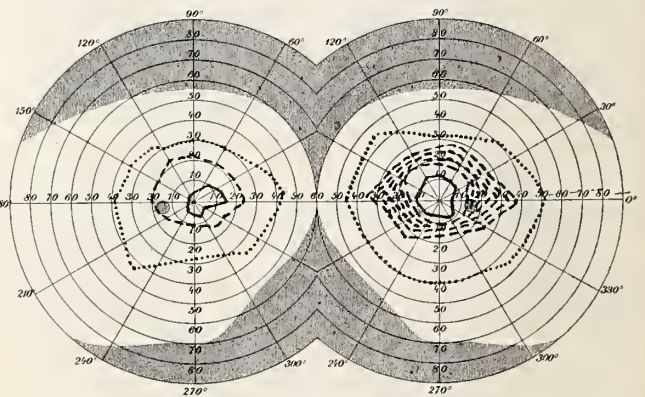


FIG. 13.—Chart showing appearance of color fields on Oct. 21, 1915. Note the constriction of fields, especially for green (lines). The visual perception of red (indicated by dashes) was interpreted as green on the right side. O. V. D. 15/15 plus; O. V. S. 15/30 plus. Form fields normal. Tests by Dr. W. W. Pearson.

vised to reach the hypophysis by this route, as regards the liability to meningitis, and yet it is by no means absolute even in the most expert hands.

In all our brain work in the last four years,

the extreme cases, but we are beginning to realize that a confusion is liable to arise from a merging of these types in the same individual.

Marie points out that oft repeated over-patho-

logic activity of the gland may lead at last to glandular sluggishness. The resulting manifestations being dys—but not a true hyper—or hypothyroidism. These principles apply with equal force to the hypophysis.

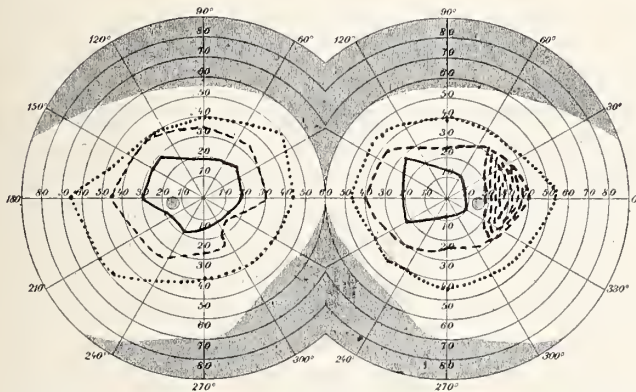


FIG. 14—Chart showing appearance of color fields a short time before operation. Under heavy doses of potassium iodide and the administration of thyroid extract some visual improvement for colors was obtained, but the cephalalgia remained unabated. Red still interpreted as green at temporal side of right eye. O. V. D. 15/15 plus without correction; O. V. S. 15/30 plus without correction. Form fields normal. Tests by Dr. W. W. Pearson.

Accepting the term dispituitarism, as applied to most cases, we are at once confronted with the additional confusion resulting from disturbances of one or the other lobes and disturbances of various kinds arising within the gland itself or from a more remote cerebral lesion.

Cushing gives five working groups as probably our best guides in avoiding confusion, viz.:

Group 1. Cases of dyspituitarism with signs of distortion of neighboring structures and symptoms betraying the effects of altered glandular activity.

Group 2. Cases with pronounced neighborhood manifestations, but presenting slight or no glandular symptoms.

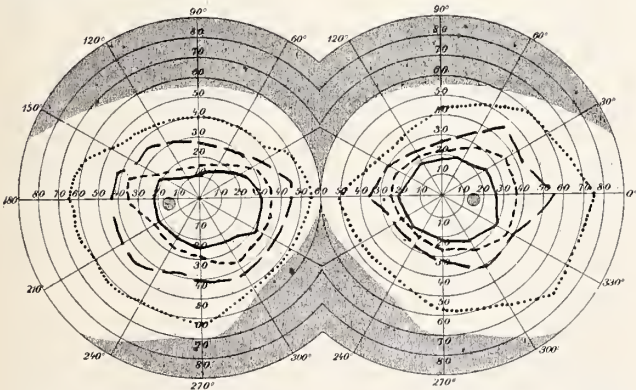


FIG. 16—Chart showing appearance of color fields five months after operation. Blue is represented by dots; red by short dashes; yellow by long dashes, and green by solid lines. Form fields normal. Test by Dr. L. C. Babcock, San Juan, Porto Rico.

Group 3. Cases without neighborhood manifestations, but with unmistakable glandular symptoms.

Group 4. Cases with obvious distant cerebral

lesions accompanied by symptomatic indications of secondary pituitary involvement.

Group 5. Cases with a polyglandular syndrome in which the functional disturbances on the part of the hypophysis are predominant feat-

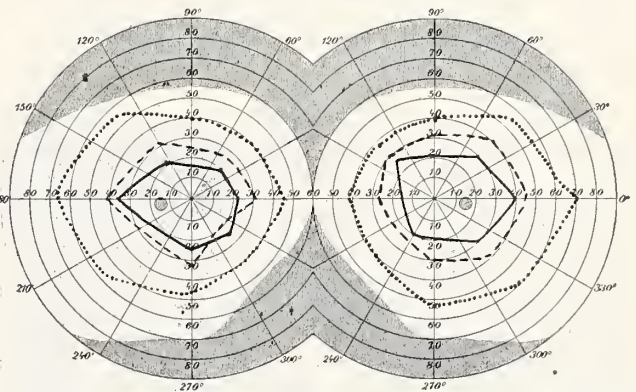


FIG. 15—Chart showing appearance of color fields 17 days after operation. Blue is represented by dots; red by dashes, and green by lines. O. V. D. 16/13 with correction; O. V. S. 16/19 with correction. Form fields normal. Tests by Dr. W. W. Pearson.

ures of a general involvement of the ductless glands.

It is evident that no such grouping can perfectly account for the dualistic manifestations encountered in under or over activity of the anterior and posterior parts of the gland.

The pars anterior seems to preside particularly over skeletal growth and to be co-related with the other ductless glands.

The posterior lobe appears to have more to do with tissue metabolism, renal activity, and the vascular system, and when its deficiency is marked, causes excessive deposit of fat.

It appears certain that acromegaly may occur without a tumor of any kind existing in or about the hypophysis, and it is also true that a tumor of the hypophysis may be of considerable size and yet there be lessened glandular activity, the reverse of acromegaly being very pronounced in the case, just as we may have hyper-thyroidism without enlargement of the thyroid, and great enlargement of the thyroid existing with hypothyroidism due to increased activity of a small gland or destructive pathologic process in a large one lessening its glandular activity.

The age of the individual at the time the pathologic process begun, producing increased or lessened activity at first or later determining growth, sexual manifestations, mental activity, etc., must be considered in the light not only of our present knowledge of hypophyseal and associated glandular activity, but in the light of the most careful and complete history of each individual case.

A patient recently seen by me in Porto Rico,

aged three years, born of healthy American parents, menstruating since birth, regular since two years of age, larger than her normal six-year-old sister, breasts as perfectly developed as any woman at twenty-five years, hair beginning to show on pubes and under the arms, figure of an adult woman, with mental capacity below normal for her age, compels careful consideration of the

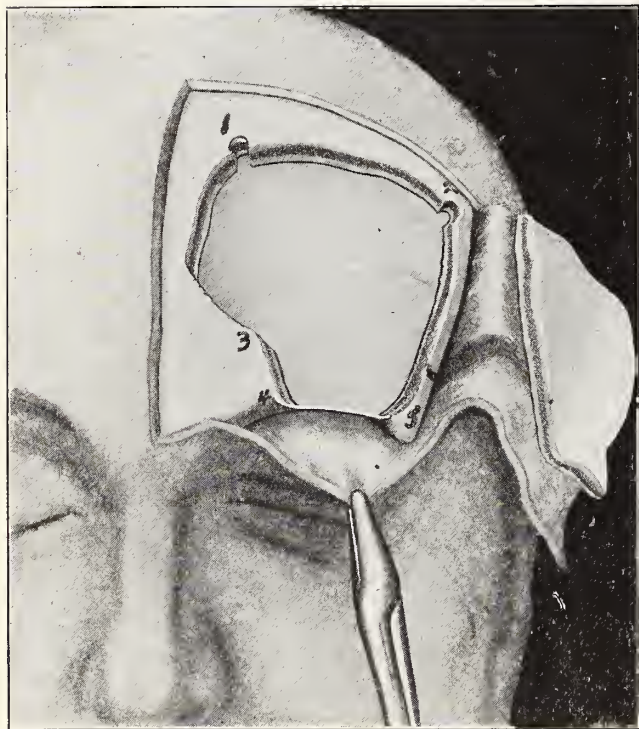


FIG. 17—Author's method of approaching the pituitary cyst. The pericranial membrane, to which the osseous portion of the flap was allowed to remain attached, was deflected outward, thus assuring a good blood supply from the temporal distribution to the flap pedicle. The removal of the osseous portion *en bloc* would appear to have a distinct advantage over the method devised by Frazier, in that no large piece of bone is entirely detached from the scalp flap. Trephine discs were removed from points 1 and 2 and the bone divided between the same by means of a Gigli saw. From points 1 to 3 a track was made by ronguers, the marked deviation outward being necessary in order to avoid opening into the frontal sinus. The supra-orbital structure between points 3 and 4, and 5 and 6, was sectioned on a bevel by means of a thin chisel to prevent inward displacement of the part where the flap was replaced. The supra-orbital plate between points 4 and 5 was removed by ronguer backward and inward to the optic foramen. After elevating the dura, the anterior clinoid processes were exposed and used as guides to the point for puncturing the cyst.

possible relation of hypophyseal disease to all these cases of abnormal manifestations of this class, looked upon in the past as freaks or medical curiosities without definite pathology.

I greatly regretted my inability to thoroughly investigate this most interesting case.

PROBLEMS OF SURGICAL JUDGMENT ASSOCIATED WITH THE TREATMENT OF GASTRIC AND DUODENAL ULCERS*

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After the writer graduated from medical college his first fee was obtained for performing an autopsy on a man who for nearly forty years had suffered from duodenal ulcer. In his will this man stated that during these many years he had consulted the most noted specialists of France, Germany and America, and that in his own mind he was convinced that he was suffering from a disease about which the doctors had very little real knowledge. Hence the provision for the autopsy.

This was in 1903 and the man's surmise concerning the doctors' lack of knowledge on this subject was correct. Today, conditions have materially changed. During the past decade and a half there has been an enormous increase in our knowledge concerning gastric and duodenal ulcer.

The accumulated data is so definite concerning some phases of the subject as to admit of only one conclusion. Other questions of the utmost practical importance are not so definitely settled and along with the facts we have much speculation and abundant theorizing and many definite assertions based on questionable evidence.

From the practical standpoint the great question in gastric or duodenal ulcer is ultimately one of treatment and nowhere in the entire realm of abdominal medicine and surgery is there a better opportunity for the employment of sound judgment than after the diagnosis of ulcer has been made.

Recently my assistant and I have been engaged in checking up our own cases of ulcer disease to see if in the past our judgment has been good or bad. It is my intention in this paper to deal with certain of the problems of judgment which we have had to solve in our own work and to indicate briefly the trend of our decisions.

Before passing judgment it is always necessary to weigh the facts in the case. In ulcer disease some of the facts are, I believe, firmly established, some others are still open to serious debate, and concerning a few points of great prac-

tical importance we are as yet very much in the dark.

Most of all we should know the etiology of the disease, but we do not. Concerning the cause or causes of these ulcers there are almost as many theories as there have been students of the question. Personally, I have never been able to disassociate from my mind the idea of a trophic origin. In many respects their nearest analogy in chronicity, in periodicity and even in pain variability, is seen in certain of the trophic ulcers encountered in nervous affections, notably the malperforating ulcers of the foot.

We do know that there is a very definite relationship between the subjective sensation of pain and the acid content of the fluid which comes in contact with the ulcer. Many writers convey the impression that the failure to heal is due to the action of the acid gastric juice, and yet this same acid fluid does not interfere in the least with wound repair after stomach surgery.

We do know that ulcer disease is a relatively common affection, far more so than was even suspected by the older clinicians and pathologists. Also that duodenal ulcer is two or three times as common as gastric ulcer and that most, but by no means all gastric ulcers, are situated in the neighborhood of the pylorus.

Clinically we know that the symptomatology, previous to the onset of complications, is usually remarkable for its definiteness, and among other things, characterized by complete remissions when, whether the ulcer is healed or not, the patient is completely free from symptoms. As regards the condition of the ulcer during these remissions our data is as yet inconclusive. Certainly there may be a remission of symptoms without healing of the ulcer, and yet it seems probable that progressive repair is the rule during the symptomless periods.

Concerning acute perforations we know that the only rational treatment is surgical. The mortality bears a definite relationship to the length of time elapsing between the perforation and the operation. Five or six hours after perforation, the death rate should not be over five or six per cent., but it rises rapidly and by the end of twenty-four hours it begins to approximate the 75 per cent. mark. A little later it is almost 100 per cent., and the period of the surgeon's usefulness has passed.

As regards hemorrhage there seems to be little doubt but that watchful conservatism should be the almost absolute rule. In our experience these hemorrhages, when alarming, have been best controlled by blood transfusion. The increased activity of thrombosis following transfusion

usually promptly stops the hemorrhage while at the same time the blood loss is made good.

The therapeutically debatable ground concerns chiefly medical vs. surgical treatment in the so-called chronic ulcers with recurring periods of active symptoms.

Here the decision as to whether medical or surgical treatment should be advised, depends first upon the immediate and remote mortality, second upon the symptomatic relief to be expected, and third upon the possible cancer incidence in ulcer.

If we turn for a moment to the last question, that of the cancer incidence in ulcer, we enter upon highly debatable ground, at present much beclouded by all sorts of assertions based upon very questionable data. Some would have us believe that cancer of the stomach usually develops on an ulcer base and that a considerable proportion of ulcers ultimately become cancerous. In the minutia of the argument the cancer advocates seem at present to have a shade the best of the discussion but there are certain broad objections which have never yet been adequately met. If ulcer is the common etiological factor in cancer, why is it that ulcer of the duodenum is several times as common as ulcer of the stomach, and yet cancer of the ulcer bearing area of the duodenum is a pathological curiosity?

The history of previous ulcer-like symptoms in a certain percentage of cancer cases is indeed suggestive but we must not overestimate its importance. The long ago made autopsy observations of *ulcus carcinomatosum* make symptoms of only two or three years duration of little significance. Then too we must not forget that a considerable proportion of the physicians present here tonight can probably recall in their own persons, periods of symptoms more or less suggestive of ulcer. And yet if we were to develop carcinomas of the stomach, how much etiological significance could we place on our almost forgotten periods of stomach trouble?

The pathological evidence purporting to show cancer on an ulcer base is fundamentally weak in that it fails to rule out the common sense probability that during the free acid stage of early carcinoma the growth itself is probably rapidly eroded by the action of the gastric juice, thus giving the picture described by some pathologists as an ulcer base with carcinomatous degeneration, the *ulcus carcinomatosum* of the autopsy room.

Undoubtedly some cancers do develop on true chronic ulcers, but I venture to predict that the future will show that most of the cancers developing on so-called ulcer bases were in reality malignant from their beginning; at first very

slow growing and localized but ultimately taking on the unmistakable characteristics of clinical malignancy. If this surmise is correct, then this part of the problem must finally resolve itself into distinguishing between early malignancy and simple ulcer of the stomach.

Granting that at present we cannot always make the distinction and that in many cases we may wish that the ulcer bearing areas were safely stored in a specimen jar, we are nevertheless confronted with the known fact that resection of the pylorus is a dangerous operation. The mortality in the best hands is six or eight per cent. while in the hands of the average good stomach surgeon it is certainly over 15 per cent. I doubt if there is a man here tonight who would submit to a pylorotomy because of the possible danger of cancer if medical or a relatively safe surgical procedure would relieve him of his ulcer symptoms. Suppose all our patients had life insurance and that it were necessary to get permission of the actuary before excising the ulcer bearing area in order to prevent subsequent cancer. I think we all can picture the difficulties we would encounter in getting the permission. And yet if radical ulcer surgery for the purpose of preventing cancer is to be justifiable, it must show results of the kind which would convince an insurance actuary that the life expectancy of the patients operated will be actually increased by the operation.

The average ulcer age is approximately forty years, that for cancer of the stomach, approximately fifty-five. The life expectancy at forty is twenty-nine years, at fifty-five it is nineteen years with an 18 per cent death rate in the meantime. It is a simple matter of mathematics to show that to justify a 10 per cent. mortality at the age of forty we must confer an absolute immunity against an expected stomach cancer incidence of over 20 per cent. at the age of fifty-five, and we must furthermore be certain that in the intervening ten or fifteen years we will make no improvements in diagnosing and treating cancer and that when cancer does develop at this later age it will be absolutely hopeless.

When the cancer on ulcer advocates demonstrate beyond a shadow of a doubt that 20 or 30 or more per cent. of unoperated gastric ulcers will surely become hopelessly malignant, and that operation will absolutely confer immunity against subsequent malignancy in the patients surviving operation it will be time to give the danger of malignancy due consideration in determining our decision for or against operation. In the meantime I believe that we will best conserve the interests of our patients if we ignore

the cancer danger altogether and treat our ulcer cases with the sole idea of giving them the greatest possible relief from distressing symptoms compatible with reasonable safety. In questionable cases the X-ray will enable us to check from time to time the condition of the stomach as regards the possibility of developing malignancy.

In the last few paragraphs I have dealt with the subject of carcinoma on ulcer in a somewhat argumentative manner. I do not, however, wish to convey the impression that we should let early cancers go unoperated under the diagnosis of ulcer. This, however, is a question of the differential diagnosis between cancer and ulcer and does not come within the scope of this paper.

If we undertake to treat our ulcer cases on the hypothesis that we should give them the greatest possible relief from distressing symptoms compatible with reasonable safety, medical treatment will, I predict, assume first place and surgical treatment be limited to cases of necessity rather than of expediency.

Possibly I should confess at the very outset that there may be a large element of personal equation in my conservatism regarding the surgery of ulcer. In my own practice I make it a fixed rule never to advise operation in any case unless under similar circumstances I would myself submit to operation. I fear this rule has cost me many ulcer operations for notwithstanding the arguments of eminent surgeons I have no desire at all to have my jejunum stitched to my stomach. Until driven to operation by repeated medical failures I would unhesitatingly choose to try medical treatment.

Concerning the actual results of either medical or surgical treatment practically our only criteria have to do with the death rate and the relief of subjective symptoms. That there is no very striking difference in the results claimed for the two methods is shown by the following tables.

REPORTED END RESULTS ULCER DISEASE

| MEDICAL Leube ¹ | | Moynihan | SURGICAL Finney Pyloroplasty | Mayo Duodenal | Gastric |
|-------------------------------|-------|----------|------------------------------------|------------------|---------|
| No. cases | 568 | 250 | ..... | 438 | 162 |
| Cured | 90 % | 82.8 % | 88.8 % | 70 % | 58 % |
| Improved | 8.5 % | 7.0 % | ..... | 27 % | 35 % |
| Unimproved | 1.0 % | 1.2 % | 6.4 % | 3 % | 7 % |
| Died | 0.3 % | 1.6 % | 5.0 % | Not included | |
| Not accounted for.. | | 7.3 % | | | |

Modern accuracy in the diagnosis of ulcer disease is due in great part to the surgeon working alone and in conjunction with the roentgenologist. The same methods of diagnosis are now available for the internist and with an unquestioned diagnosis he should be able to plan his treatment in a thoroughly rational manner and extend it over long periods of time. In my experience a defin-

ite diagnosis of ulcer, unless accompanied by well marked evidences of complications, has been practically equivalent to a symptomatic cure. We have treated these cases according to the general principles recently so clearly outlined by Sippy¹, and I agree with him when he states that the vast majority of cases of gastric and more particularly duodenal ulcer can be readily and quickly cured by management according to the principles so clearly outlined by him although they have been in general use by many physicians for a number of years past.

From the above remarks it might be supposed that we are opposed to operations for gastric or duodenal ulcers, which is far from the truth. We do feel, however, that the preponderance of literature, much of it of a rather argumentative nature coming from surgical sources, has tended to somewhat obscure the perspective and we are constantly having referred to us for operation patients who have not had any of the benefits of systematic medical supervision.

Of course, there is no doubt about operating at once the cases of acute perforation and those of definitely suspected malignancy. Among the remainder, which comprise at least eight-tenths of the cases seeking relief, the question of social condition is a very important factor. The average merchant or professional man can usually carry out with intelligent co-operation and for an indefinite period without loss of time or working efficiency the dietary regime of medical management. Likewise the intelligent mechanic, clerk or barber and particularly the housewife working always in easy reach of her dietary and alkalies. But in the case of the man doing heavy manual labor requiring a large food intake to supply his energy needs, the problem becomes one of great difficulty. Particularly is the problem difficult among railroad trainmen, street railway employes and others of irregular and exacting hours.

The results following a simple posterior gastro-enterostomy in cases of definitely stenosing ulcers of the duodenum or pylorus are so uniformly satisfactory and in competent hands the danger is so slight, that as a rule these cases should not be subjected to undue procrastination.

Non-stenosing duodenal ulcer gives very good results following a gastro-enterostomy but usually

equally good results from medical treatment which should be tried faithfully up to the limits imposed by the social and economic position of the patient before advising an operation.

Gastro-enterostomy cannot be depended upon to cure ulcers situated at some distance from the pylorus. The results of excision alone or combined with gastro-enterostomy are by no means certain and the dangers associated with the operation itself are not slight. In these cases we unhesitatingly recommend conservative treatment pushed with the utmost care and perseverance.

Irrespective of the situation of the ulcer, the so-called gastralgic type is occasionally encountered. Here constantly recurring pains, usually of considerable intensity, may fail to yield to any form of treatment and make the patient's life so miserable that he is willing to take long chances in the hopes of receiving relief. These patients should not be denied the possibility of surgical relief but the decision should be put squarely up to the patient after explaining to him all of the pertinent facts in the case.

In conclusion let me say that the accurate diagnosis of ulcer is of the very greatest therapeutic value. It enables the internist to carry out with unflinching determination a rational line of medical treatment. At the same time along with the accumulating data concerning surgical end results, it enables the surgeon to estimate the probable benefits to be derived from operation.

In properly selected cases operated by a competent surgeon gastro-enterostomy is a safe procedure, yielding wonderfully satisfactory results but it is not a cure-all and in incompetent or too enthusiastic hands it is liable to yield disappointments of the first magnitude.

Resections and the more radical gastric operations undoubtedly have a certain usefulness but as yet they should be viewed as operations of necessity to be advised only when the medical consultant himself would be willing to submit to a similar operation under similar circumstances and availing himself of the same surgical skill and facilities.

Each year I have operated a few chronic ulcer cases. We have never had a fatality from gastro-enterostomy and our operative end results have been all that we could wish. Nevertheless the majority of ulcer cases seen by us have been cured or at least relieved of subjective trouble by judicious medical treatment carried out in conjunction with the family physician.

1. Sippy, B. W.—Gastric and Duodenal Ulcer—Medical Cure by an Efficient Removal of Gastric Juice Corrosion. J. A. M. A., 1915, lxiv, 1623-1680.

ELIE METCHNIKOFF

A Brief Reminiscence of the Man and his Life-Work

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The death of Elie Metchnikoff on July 17, 1916, served to call very vividly to my mind one of the most remarkable and interesting personages that it has been my privilege to know.

It was in the summer of 1905 that I went to Paris to do some work at the Pasteur Institute.

Believing that a brief description of the personality and life work of Metchnikoff at this appropriate time will be of interest to many others I have put in article form my notes concerning this remarkable man, who being a ready and will-



ing talker, gave me opportunity to learn at first hand, not only of his scientific work but much of his personal history.

Metchnikoff, as would be suggested by the name, was a Russian. He was born near Kharkov, May 15, 1845. His father was on the Russian military staff. From his mother, a Jewess, he inherited a strong desire for the study of science. After completing the high school and university courses of his native city, he went to Germany and studied at Giessen, Göttingen and Munich. He then returned to Russia, taught for a short time in the University of St. Petersburg (now Petrograd), and in 1870 went to the University of Odessa to take the Chair of Zoology. Not long after, he left his native land, since, belonging to the Jewish race and having a strong desire for religious and political liberty, he did not find life congenial in the country of his birth.

He went to Italy, where he made the discovery that made him famous. I refer to his discovery

that leucocytes are capable of ingesting and destroying bacteria. Through this work he became interested in bacteriology and naturally went to Paris to work with and receive inspiration from the great Pasteur, the father of that science. Soon after the death of Pasteur, Roux was made director of the Pasteur Institute and Metchnikoff sub-director and chief of the division of bacteriology. Here he worked until within a few months of the time of his death, July 17, 1916. His death is reported to have been due to heart disease. His heart had given him more or less trouble ever since he submitted to an intentional inoculation with the micro-organism of relapsing fever. He was twice married. His second wife was a well-known Russian bacteriologist. He had no children.

Metchnikoff was a man of rather small stature, had a large head, a large bushy beard which when I last saw him, eleven years ago, was distinctly gray, although the hair on his head was still quite dark. His eyes were of a bluish gray color and he was seldom seen without his glasses. When working in the laboratory or sitting in his office he assumed a rather stooped attitude. His low voice and facial expression were indicative of a kind and sympathetic disposition. He was interested in many subjects and enjoyed talking of his researches. He was an indefatigable worker. He aimed at truth always, although it must be admitted that he often drew conclusions unwarranted by the data at hand. He took a philosophically hopeful view of life. He referred to himself as an optimist on scientific grounds.

I shall briefly discuss his more important contributions to the science of medicine in the order in which they were made.

Phagocytosis—It was while he was in Italy at Messina, the earth-quake city of Sicily, that he first observed, while studying by means of a microscope, minute transparent marine forms of life infected with micro-organisms, how the leucocytes ingested and destroyed the infective agents. This discovery of phagocytosis and his publication of an explanation for inflammation and a theory of immunity immediately brought him renown. The importance of his discovery was recognized by the great German pathologist, Virchow, and the famous French bacteriologist, Pasteur. Phagocytosis is Metchnikoff's greatest contribution to science. Although the discovery of antitoxins and bactericidal substances in the blood serum lessened, somewhat the importance given to leucocytes in infections as conceived by the discoverer of phagocytosis, nevertheless the more recent work on opsonins has served to again

call attention to the very important role of leucocytes in the destruction of bacteria.

Old Age and Its Prevention—During the past fifteen years, Metchnikoff has given serious thought to the problem of old age and its prevention. He, as others, had observed that phagocytes which as a rule tend to protect the system from infection will, under certain circumstances, attack the body cells, including the higher nerve cells. He believed that this apparent perversion of the function of phagocytes is caused principally by the mild long-standing action of certain bacteria—hence the following definition: "Old age is an infectious disease characterized by a degeneration or an enfeebling of the noble elements and by the excessive activity of the phagocytes."

The infective agents which he believed to be principally responsible for the changes incident to old age were the putrefactive bacteria of the intestinal canal with the subsequent absorption of poisons. Hence he hoped to prevent the premature oncoming of old age by the prevention of such putrefaction. This can be accomplished in part by the ingestion of sour milk, by virtue of its lactic acid producing bacteria. Metchnikoff is responsible in largest measure for the present day lactic acid or sour-milk therapy, especially by means of that greatest lactic acid producer—the Bulgarian bacillus. Unfortunately he was inclined to draw conclusions from insufficient evidence. This is especially true in connection with this subject. There seems to be no doubt but that sour milk is of value in the treatment of a number of abnormal intestinal conditions but there is as yet no real scientific evidence to indicate that it has any specific influence in the prevention of old age. It must be said that Metchnikoff's views have frequently been misinterpreted. By way of ridicule, he has been referred to as "the modern Ponce de Leon searching for the Fountain of Immortal Youth and finding it in the Milky Whey." He never claimed that he had discovered a new Elixir of Life. I well remember how, when working in the laboratory, he would daily take his potion of Bulgarian bacillus buttermilk, but I also remember his remark that it could hardly be expected that his friendly bacteria could do much in turning back the tide of years in a man who already had a well-defined arcus senilis.

Although his views on the prolongation of life are as yet not substantiated and in part have been disproved, he has nevertheless demonstrated that by simple living, proper dietetics, exercise, an optimistic view of life, and moderation in all things, it is possible to considerably prolong the

prime of life—the period of usefulness. Metchnikoff, himself, was engaged in useful work and enjoyed living until the time of his death, at the age of seventy-one.

Experimental Syphilis—I had been at Berlin several months previous to going to Paris. There the bacteriologists were afire with enthusiasm concerning the work of Fritz Schaudinn who only a month before had announced the discovery of the *Treponema* (*Spirochoeta*) *pallida* as the cause of syphilis. There Metchnikoff's name was mentioned in high terms for the remarkable results which he has obtained with the experimental reproduction of that disease. I was therefore very much interested in studying the lesions of syphilis—primary, secondary and tertiary—which he had succeeded in reproducing in a number of chimpanzees as early as 1903. I was also very much interested in going over some of the slides of syphilitic lesions which Metchnikoff had prepared several years before and in which the specific micro-organisms were present. Metchnikoff should have been the discoverer of the causative agent of lues. He saw the pale spirochaetes several years before Schaudinn did but he did not at that time consider them of etiologic significance and did not publish his findings.

Until this demonstration of experimental syphilis, it had been believed that this disease could not be transmitted to the lower animals. The study of experimental syphilis in monkeys and rabbits since that time has greatly extended our knowledge of that disease.

Sensitized Vaccines—Metchnikoff's latest important contribution was made in 1913, when he and Besredka published their work on sensitized vaccines. They sensitized bacteria by treating a suspension of the micro-organisms with serum from an animal which had been injected with and hence immunized against the micro-organisms in question. It was presumed that the amboceptors or immune bodies present in large quantity in such antiserum, would become anchored to the bacterial cells of the suspension and thus the latter would be prepared for their destruction by complement immediately after injection into the body. Believing that living bacteria were more capable than dead ones of stimulating the system to the production of immune bodies and assuming that the bacteria were killed immediately after introduction into the body and could not therefore infect the body, the first sensitized vaccines were prepared with bacteria that had not been killed as is ordinarily done in preparing bacterial vaccines. Thousands of French soldiers were treated with living sensitized ty-

phoid vaccine. In no case was the disease produced nor so far as known, did any carrier condition occur. Nevertheless it has been shown that bacteria that have first been killed may also be sensitized and thus there need be no anxiety concerning the production of infection. It has been shown that sensitized bacteria produce less reaction at the time of injection and produce immunity more promptly although to a less marked degree than unsensitized bacterial vaccines. The sensitized vaccines would therefore seem to be preferable in the treatment of disease.

The life of Metchnikoff and the contributions which he has made to the science of medicine should be an incentive to everyone to accomplish greater things. Although not trained as a physician, yet he was one of the greatest contributors to our science. He well deserved the honor to have shared with Paul Ehrlich, in 1908, the Nobel prize for medicine. He carried forward in a most worthy manner the spirit of research in the field of medical bacteriology so well begun by his friend and predecessor—the great Pasteur.

THE EPIDEMIOLOGY OF POLIOMYELITIS

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The present alarming epidemic of poliomyelitis in New York City may be the precursor of a recrudescence of the disease over the entire country, but it is to be earnestly and sincerely hoped that a repetition of the severe epidemics of 1907, 1910 and 1911 may be prevented. The first of these outbreaks found the medical profession generally in a state of unpreparedness, but subsequently considerable attention has been paid the disease and some valuable observations have since been contributed to our knowledge. Since the disease so often leaves its victims in a condition of helplessness which does not readily respond to treatment, the institution of preventive measures against poliomyelitis, is, from a practical standpoint, of the greatest importance, yet sufficiently adequate means of defense are not known. It is in view of its possible recrudescence in our state that this brief review of our present knowledge of the transmission of the disease and its control has been prepared.

Clinical Types—The classical studies of Wickman upon the disease in Sweden during 1905-06 have resulted in his description of eight clinical types of the disease, as follows:

I. The *spinal poliomyelitic* type, which is the most common and the typical form of the disease. Following an abrupt onset with fever, intestinal

disturbances or sore throat, headache, pain or rigidity of the neck and spine, and pains in the extremities of varying intensity, in from one to six days there suddenly develops a flaccid, motor paralysis of muscles having a spinal innervation, which is of varying extent. The lower limbs are more frequently affected than the upper.

II. The *ascending or descending form*—This type most frequently first manifests itself in a paralytic involvement of the lower extremities, which later ascends, until in some instances it involves the whole body.

III. In the *bulbar* type the muscles affected are those whose innervation comes from cranial nerves having their nuclei in the medulla or pons.

IV. In the *encephalic* type the motor areas of the brain are involved with a resulting hemiplegia or monoplegia.

V. The *ataxic* type is characterized by an acute ataxia, from which paralysis may be lacking.

VI. The *polyneuritic* type closely resembles multiple neuritis.

VII. The *meningeal* type includes two groups: (1) cases whose onset is marked by symptoms of meningitis, but which later resolve into typical spinal or bulbar paralysis and (2) in which paralytic manifestations do not follow the meningitis.

VIII. The *abortive* types, of which he distinguishes several, present the initial symptoms of the typical disease, but are not followed by paralysis. He distinguishes the following groups of the abortive type:

- a. With symptoms of general infection,
- b. With symptoms of meningitis,
- c. With hyperæsthesia and pain,
- d. With gastro-intestinal disturbances.

Peabody, Draper and Dochez adopt a less elaborate classification as follows:

I. Bulbo-spinal type—the typical paralytic form, I, II, III of Wickman.

II. Cerebral type—IV, V; VI and VII of Wickman.

III. Abortive type—VIII of Wickman.

A clinical diagnosis is possible in cases presenting symptoms referable to the central nervous system, such as are manifested by the first seven clinical types, but exceeding difficulty is attached to a diagnosis of the abortive types since usually they can only be recognized by reason of their relation to typical cases of the disease. In this connection it may be said that various observers, during the course of some of the previous outbreaks have noted that the prevailing dis-

eases of children not considered at the time to be poliomyelitis, were accompanied by unusual nervous symptoms, a circumstance which would indicate that a certain number of these cases were undoubtedly poliomyelitis. It should also be remembered that many of these abortive cases are only so slightly ill that the services of a physician are not secured. Just what is the correct proportion of abortive to paralytic cases it is impossible to say, since any statistics secured with our present limited means of diagnosis will always overlook many abortive cases. About 15 per cent. of the total cases studied by Wickman were classed as belonging to the abortive types, but in various epidemic foci, where opportunities permitted the tracing of all cases, the abortive types were found to include from 48 to 52 per cent. of the total cases. In Massachusetts the observed percentage of abortive cases was 26.6, in Iowa 37, and in Nebraska 40. These cases frequently occur in the same household with the paralytic cases. These circumstances emphasize that a definite and lasting paralysis cannot be made the sole criterion of a diagnosis of poliomyelitis. One will not be proceeding in advance of available evidence to conclude that the non-paralyzed cases are the more usual form of the disease, while the paralyzed cases are the less frequent forms. And, as will be seen later, the non-paralyzed cases are the most dangerous from the standpoint of transmission.

Etiology—In 1909 Landsteiner demonstrated, through the inoculation of monkeys, that poliomyelitis was a communicable, infectious disease, in which animals the reproduced disease presented characteristics closely similar to the disease in man and later Flexner and Noguchi reported the cultivation of minute micro-organisms from the tissues, and which, in inoculation into monkeys, produce the experimental disease, from which animals it can be recovered in pure culture. The micro-organism is also able to withstand the effects of preservation in glycerine, in a similar manner to that in which the virulence of tissue is maintained. Rabbits are the only other animals which have been found susceptible to the virus, but their susceptibility seems to be highly inconstant and the disease reproduced does not closely resemble the experimental disease in monkeys. Young rabbits are the most susceptible.

Sources of the Virus—In the human body the virus of poliomyelitis has been demonstrated in the following conditions and situations:

(a) *In those dying from poliomyelitis*—The virus has been demonstrated in the brain, spinal cord, mesenteric glands, tonsils, mucous secre-

tions of the naso-pharynx, the trachea and the intestines.

(b) *In those acutely ill with poliomyelitis*, both those suffering from the paralytic types of infection and those with the abortive forms of the disease. The naso-pharyngeal secretions and rectal washings have been found to be infective.

(c) *In those convalescent from acute poliomyelitis*—The recorded observations indicate that in a very large proportion of convalescents the secretions remain infective for weeks or months, occasionally for periods as great as six months following onset.

(d) *In healthy persons*—The virus has been demonstrated in the naso-pharyngeal secretions of healthy persons living in greater or less association with cases of poliomyelitis. It would seem probable that a certain proportion of healthy persons, may, following contact with poliomyelitis cases or carriers receive infection and become carriers of the virus, but the proportion of such to the entire population, or to the cases of the disease, is not known.

(e) *Outside the human body*—In this situation the virus has only been demonstrated in the immediate environment of infected individuals. The dust of rooms occupied by patients and the surfaces of articles recently handled by them have been found to contain the virus.

The presence of paralytic affections of domestic animals in communities where poliomyelitis was epidemic, has lent some color to the view that domestic animals might serve as a source of infection. However these cases have never been sufficiently numerous to account for the epidemics, nor in sufficient contact with persons developing poliomyelitis to indicate that infection was received from animal sources. Paralytic diseases of animals may be due to a variety of causes, but from the evidence available it cannot be said they increase simultaneously with poliomyelitis.

Entrance of Virus into the Body—Our present knowledge is mainly the result of experimental work upon monkeys. These may be infected by inoculation of the virus into the brain, the subdural space, the general circulation, the peritoneal cavity or the subcutaneous tissue. Successful infection have also attended inoculations made by rubbing the virus upon either the scarified or uninjured nasal mucous membrane, which latter circumstance probably closely approximates the conditions of natural human infection. Infection of monkeys has also followed the introduction of large dosage of the virus directly into the stomach.

*Epidemiological Characteristics—Season—*While cases have been observed during every month of the year, yet the preponderance of cases, both sporadic and epidemic, reach a maximum in the late summer and fall and decline to a minimum in mid-winter and spring. In this characteristic poliomyelitis more closely resembles those diseases transmitted by infective gastrointestinal discharges, rather than these spread by infective naso-pharyngeal secretions.

*Age and Sex—*Children under the age of five, who constitute from 9 to 12 per cent. of our population, furnish from 50 to 90 per cent. of the cases of poliomyelitis. Adults, meaning those over twenty years, while constituting about 50 per cent. of the total population, seldom furnish over 10 per cent. of the cases, and usually a much smaller proportion. Actually and proportionately more males are attacked than females, a feature more striking among the ages over fifteen.

Even during epidemic outbursts but a relatively small percentage of the total population is attacked. In rural areas as many as one per cent. of the population has been attacked, while in larger communities the incidence of the disease is seldom over one-tenth of one per cent. of the population. This is much less than the annual incidence of many of the more common contagious diseases. The epidemics are self limited, declining after a few months and do not usually recur in the same locality for a period of at least two years. Just why the epidemics decline after having attacked such a small proportion of the population is not clear—the only explanation available is from the exhaustion of the susceptible material in the population.

*Rural and Urban Incidence—*It has been a general observation that epidemics in the rural areas, including the smaller towns and cities, attack a larger percentage of the total population than in the larger centers. It is not known however whether this ratio would hold true for sporadic cases. It is difficult to judge just why this condition should exist, since it markedly differs in this respect from scarlet fever and measles which are more constantly present in thickly populated centers. Data available, however, indicate that epidemics of even these diseases obtain a larger incidence in rural than urban areas, in other words, the potential epidemic prevalence of these diseases is inversely proportional to their endemic prevalence. (Frost's law.)

*Social Incidence—*In epidemics about the same number of persons living under good and poor hygienic or sanitary conditions are attacked.

This eliminates from consideration as factors of causative importance, inadequate food, overcrowding, personal uncleanness and body vermin.

*Mode of Transmission—*Epidemiological studies, have for the most part revealed little which would indicate the means by which the disease has spread. Wickman was able to discover some lines of direct and indirect contact between cases in some small epidemics and Sawyer has had similar experience. In another outbreak studied by Wickman it appeared that a small milk supply had been responsible. But in a general way it may be said common water and food supplies do not seem to have participated in the dissemination of the disease.

Great interest was aroused a few years ago upon the announcement by Rosenau of successful transmission experiments with the disease in monkeys through agency of the stable fly, *Stomoxys calcitrans*. Anderson and Frost later succeeded in the same work, but other experimenters and Rosenau and also Anderson and Frost in their later work were unable to repeat their previous results. From these results it would appear that while insect transmission of poliomyelitis is possible, it is not a factor of any great importance in the perpetuation of the disease, since successful experimental results have occurred so rarely. Transmission of poliomyelitis by biting insects has been suggested because of the seasonal prevalence of the disease, which corresponds to the season of maximum prevalence and activity of most insects, the greater prevalence of the disease in rural communities and the irregular distribution of the cases during an epidemic. On the other hand, the idea of insect transmission does not explain the relatively small number of cases occurring, even at times of epidemic prevalence, nor the marked incidence of the disease in children.

We probably are justified in concluding that the present available evidence indicates that the principal if not the chief role in the spread of the disease is by direct transfer of infection from person to person, i. e., that the disease is contagious. Frost, in his studies pursued in Iowa, Ohio and New York, has contributed much to our data in this respect. He considers the evidence from two viewpoints; first from the incidence of the disease among those in contact with infected persons and second, from the proportion of recognized cases which gave a history of contact.

Frost found that of 2,070 persons exposed to poliomyelitis by residence in the same houses as cases of poliomyelitis, only 14 (0.6 per cent.) de-

veloped the typical paralytical form of the disease. Assuming that all these actually contracted the disease from the sick member of their household, the contagiousness of poliomyelitis must be very slight. In comparison with scarlet fever on the basis of Chapin's studies, it is seen to be less than one-fifteenth as contagious. The inclusion of the abortive cases, approximately doubles this ratio, while the inclusion of the less definite suspected cases, only raises the per cent. of contacts who contracted the disease to 3.2 per cent., while in scarlet fever the percentage of secondary cases arising was 9.9 per cent. of susceptible persons exposed and in diphtheria 6.5 per cent. This is substantiated by the relatively few cases developing in school and institutional outbreaks, though Frost, in Hancock county, Iowa, observed an exception to this.

Frost found that only 23.1 per cent. of the total cases investigated by him gave a history of known contact with definite and suspected cases of poliomyelitis. The majority of cases cannot be traced to known contact, either direct or indirect, with any previous case. This serves to indicate quite clearly that recognized cases of the disease must be relatively minor sources of infection.

We have knowledge that the virus is present in the naso-pharyngeal and gastro-intestinal secretions of typical paralytic cases, but we also see that few, only 0.6 per cent. of persons exposed to such cases, contract the typical disease. The disease then must be either slightly or rarely transmissible, due either to a low degree of virulence of the virus, or the possession of an almost universal immunity towards it.

Since on the recognized cases can be placed the responsibility for but less than 25 per cent. of the paralytic cases which are readily recognized, transfer of infection by direct or indirect contact must take place through agency of either unrecognized, atypical cases or healthy carriers of the virus.

The virulence of the virus, as far as may be judged from the strains which have been used for experimental purposes, is relatively speaking, quite resistant to harmful conditions and stable in its pathogenicity. On the other hand, from the experimental work of Peabody, Draper and Dochez, it would appear that natural immunity toward the disease is quite widespread. Several workers have shown that the blood serum of monkeys and human beings which have recovered from the infection is capable of protecting normal animals against fatal doses of the virus. Anderson and Frost demonstrated this property in the blood serum of 66.7 per cent. of a series of

abortive cases. They also demonstrated that normal serum has some limited neutralizing action, while Peabody, Draper and Dochez found that four of six specimens of normal sera tested gave complete protection against the virus. They suggest that the immunity in these cases may be acquired as the result of abortive attacks, rather than due to a natural immunity. However, it appears that age is a factor of importance, since susceptibility, judging from the age distribution of the cases, is usually greatest in the first five years of life and progressively diminishing towards adult life.

The disease has been characterized by the great proportion of cases in children under five and by the fact that disproportionately more males are attacked than females, especially in the ages above fifteen. If the disease were transmitted chiefly by contact with the sick, we would not find such an incidence among adult males, since females over fifteen are more frequently in contact with the cases. Males of this age are usually engaged in activities which take them away from home for larger periods than females and are in greater and more promiscuous contact with a wider range of persons. Thus males over fifteen would have greater chances of infection than females, and if the susceptibility of both sexes be equal, would present a larger number of cases.

Prodromal Period—The prodromal period has in the past usually received little attention, but its importance is great, inasmuch, as quarantine and isolation should then be instituted in order to be really effective, and it is only during this period, before an extensive destruction of nerve cells takes place, that treatment, other than orthopedic, can be effective. Our greatest hopes of controlling the disease, therefore, rest on its detection in this stage of the disease.

The duration of the period is variable, in extremes it may vary from one to seven days and perhaps averages from one to three. The symptoms may increase progressively in severity or they may show a distinct cessation, and the child apparently recover. Paralysis may then appear without warning. The severity of the prodromata may vary markedly and do not appear to bear any relation to the extent of the subsequent paralysis or the course of the disease.

Among the general symptoms of the prodromal stage, fever is most marked. It may or may not appear with the onset of the illness and usually subsides before paralysis develops. Profuse sweating has been frequent in some epidemics. Drowsiness is a noticeable symptom in many cases, though some may show a marked irritability. Pain on passive motion is very frequently

noticed, especially on anterior flexion of the spine. Stiffness of the neck and a definite resistance to flexion are common. Spontaneous pain in the head, back of the neck, in the back or in the legs is often present, though usually transient, and is frequently found in those limbs which subsequently become paralyzed. Weakness of one or more groups of muscles or an entire limb is not an infrequent precursor of paralysis. Muscular tremblings and tremors are less common. Most cases show an early exaggeration of reflexes during the irritative stage, followed by a loss of reflexes during the paralytic stage.

In some epidemics respiratory symptoms have been common prodromata, including "cold" in the head, conjunctivitis, angina or bronchitis. Gastric symptoms have been more commonly observed in this country, and comprise loss of appetite, nausea and vomiting, which last is frequently the first symptom observed. Most children vomited only once or twice and only after the taking of food.

The great difficulty is that none of these symptoms are distinctive, they can only serve to place the physician on his guard. Leucocyte counts have been very variable, so inconstant as to be of little assistance. Many cases have shown a leukopenia, while others have found a slight but marked leucocytosis. More valuable assistance may be obtained by examination of the spinal fluid, which usually shows deviation from the normal in the first few weeks after the onset. During the early days of the disease, especially before the onset of paralysis, an increased cell content is found together with a low or normal globulin content. The character of the cells present is not constant, however polymorphonuclears may predominate, but usually lymphocytes are the exclusive cells present. After the first two weeks the cell content usually drops to normal and there is frequently an increase in the globulin content. Similar changes are found in the spinal fluid of abortive cases. Fehling's solution is quite constantly reduced.

Administrative Measures—(1) In our state poliomyelitis is a quarantinable disease and as such must be promptly reported by the attending physician in writing, within twenty-four hours, to the Mayor or Township Clerk, according to the residence of the patient. In this connection the importance of the prompt recognition of cases in the prodromal stage, as well as the abortive cases, cannot be over-emphasized. Cases regarded as suspicious should be likewise reported and isolated until their status can be determined. If reporting is followed promptly by quarantine

and efficient and complete isolation of the patient in the home, we may hope to reduce the number of cases about one-fourth. The quarantine should extend to all persons residing upon the premises.

(2) In the preceding pages we have presented the role abortive cases and healthy carriers play in the spread of the disease. Unfortunately we lack specific means for the detection of such cases and therefore it is highly important to reduce, by every means possible, all opportunities for contact among children. If poliomyelitis is prevalent in a community, all children under fifteen should be kept *strictly at home*. They should not be permitted to attend school, church, Sunday school, the "movies," to go to stores or any place of public entertainment, or to travel on trains or street cars, or to congregate on the streets or elsewhere. All visiting back and forth between homes could well be abandoned. Our greatest weapon is the efficient application of these measures, which at the same time will be difficult to attain without popular assistance.

(3) The widest publicity should be given to the distribution of the disease in this state and elsewhere. Health officers and physicians should follow the spread of the disease from the Federal "Public Health Reports" and from news items in the daily papers. Local Boards of Health should require persons coming from infected localities to uninfected areas to confine themselves closely to the place of their destination for a period of two weeks under observation, after which if no indication of the disease has appeared, they may be governed by the same regulations applying to the community as a whole.

(4) All public conditions which make possible the direct transfer of naso-pharyngeal secretions from person to person, such as common towels, common drinking cups, etc., must be abated. In addition the vicinity of "sneezers" and "coughers" should be avoided. People should avoid handling objects in public places that are apt to be handled by large numbers of people.

(5) People living in the vicinity of poliomyelitic cases should use extra effort to keep flies from their houses if the patients' excreta are deposited in a privy.

(6) Quarantine may only legally be maintained for a period of twenty-one days from the onset, though without question, a longer period would be highly desirable. However, other susceptible persons are to be quarantined for a period of ten days following the death or recovery of the patient.

(7) Local boards should require their health officer to ascertain the movements of the patient for a period of seven days preceding the onset of the disease and also the persons with whom he has been in most intimate contact. These should be kept under observation for a period of a week.

(8) In the room in which the patient is isolated, care should be taken to render every object non-infective before removal from the room. Feces, urine, bedding and dishes must be well disinfected. All naso-pharyngeal secretions should be received in paper towels or old cloths and burned. A basin of antiseptic solution should be placed inside the bed room door for use by the nurse on her hands before leaving the room. The nurse should wear a gauze mask over the nose and mouth, but other covering is unnecessary. If efficient isolation cannot be secured at the patient's homes, local boards should make provision for their hospital care.

9. It is unfortunate that in a great many localities calls have been made for "clean up" campaigns and local authorities have undertaken them, either in an effort to prevent the appearance of poliomyelitis or control the disease after its appearance. "Clean up" campaigns are highly desirable and there are but few Iowa cities and towns which would not be more attractive places to live in after the completion of such a campaign. Yet such a campaign should be undertaken only for itself alone and not as a means of controlling poliomyelitis, which assuredly it will not do.

Therapeutic Measures—The delayed recognition of the disease has usually prevented the institution of active therapeutic measures until after the appearance of paralysis, at a time when the maximum injury has already been done. Consequently treatment during the active stage of the disease has usually been unsuccessful and the physician's endeavors have been usually confined to various orthopedic measures to alleviate or overcome the results of the destructive changes in the central nervous system.

If therapeutic measures are to be successful in the early stages of the disease, the cases must be recognized early. Lumbar puncture and examination of the spinal fluid must be employed in this connection. Dr. Meltzer of the Rockefeller Institute has recently reported highly encouraging results following the intraspinal injection of epinephrin. Monkeys, which had been experimentally inoculated with fatal doses of the virus and which were in the paralytic stage of the disease, following the intraspinal use of epine-

phrin showed remarkable improvement in the paralysis and their life was prolonged. Dr. Meltzer recommends the use of epinephrin in a one to one thousand solution, and for human administration he gives about two cubic centimeters, intraspinaly in the lumbar region, every six hours from the beginning of the disease until the paralysis is overcome. In a personal communication he states that on human beings it does positively no harm, and from an extensive experience in one hospital it undoubtedly had a good effect; *it cleared up all the paralysis.*

THE PRACTICAL DIAGNOSIS AND THE TREATMENT OF BENIGN TUMORS OF THE BLADDER*

EDW. J. HARNAGEL, M.D., Des Moines

Tumors of the urinary bladder until recently formed one of the most troublesome problems in surgery, and this was true of the benign as well as of the malignant variety. Many a surgeon had performed suprapubic excisions of growths thought to be benign papillomata and had rejoiced in the pathologists' assurances that the resected tumors were not malignant, only to find upon subsequent examinations of his patients that they were as far from being cured as before operation. Indeed, in many instances cystoscopy revealed multiple neoplasms where there had been only one before. Not only was the surgeon keenly disappointed, but his patients were unspeakably horrified at the prospect of more weeks of latrinous suprapubic drainage without promise of results any better than those from the first operation. Naturally many declined further treatment and sooner or later died of hemorrhage, sepsis, and exhaustion.

On account of these frequent recurrences with their distressing sequences there arose dissensions between the surgeons and the pathologists, with the result that the latter gave in to facts presented by the former; they accordingly revised the chapter in pathology relating to bladder tumors and taught the profession that certain growths are semi-malignant, but if in these the pedicle be widely excised and found free of histologic outlawry there is no malignancy present. This contention, however, vitally side-stepped the issue inasmuch as surgeons could not often excise unusual portions of the bladder in order to disprove the pathologists' argument. Furthermore, the question of multiple recurrences re-

*Read before the Polk County Medical Society, January 25, 1916.

maintained untouched. Consequently all tumors of the bladder came to be regarded as either potentially malignant or frankly malignant, and were so treated—that is, by radical excision. Soon, however, it was recognized that while radical and extensive excision is the correct treatment for infiltrating tumors, such procedure entails an unnecessary sacrifice of healthy tissue in the cases of non-infiltrating tumors. Moreover, in either type, operation was frequently followed as before stated, by recurrence, single or multiple, either at the site of excision or by implantation in other parts of the bladder. Hence the treatment, especially of the benign tumors, was quite as far from satisfactory as the diagnosis.

Two requisites were needed if real efficiency in dealing with these tumors was to be attained. First, improvement in diagnostic methods so that only malignant growths would be submitted for a radical operation; second, a less radical but more successful method of removing the benign growths. The few successes reported by experts with operating cystoscopes failed to relieve the pessimism of the situation.

In 1910 a new light appeared which has placed both the diagnosis and the surgery of bladder tumors upon a high plane. This new light came in the form of a therapeutic agency—the high frequency current, used in the manner now called fulguration, desiccation, or electro-coagulation. To employ this in the treatment of bladder tumors was an idea conceived by Edwin Beer of New York, to whom all credit is given, and the method is, therefore, a thoroughly American procedure. In the *Journal of the American Medical Association* of May 28, 1910, (Removal of Neoplasms of the Urinary Bladder, p. 1768) Beer relates his early experiences and reports two cases of vesical papilloma, the first ever fulgurated, successfully treated. The results of Beer's work, so modestly and so unselfishly announced to the medical world, have been well proclaimed in the frequent published reports of cases and series of cases permanently cured by his method of applying the high frequency current. And furthermore, it has been possible to differentiate early the malignant vesical tumors and to separate them as the goats from the sheep while there was yet hope for success in radical operation. The final and lasting endorsement came when at the April, 1915 meeting of the American Urological Association at Baltimore, Thomas, Keyes, Geraghty, Schmidt, Buerger, and others declared the high frequency treatment to be the one par excellence for benign vesical neoplasms; by Thomas and Keyes, it was also held to be the only really practical diagnosis

differentiating the benign from the malignant growths.

Thomas says: In any case of vesical neoplasm "the proper method of procedure should hinge upon the determination of the benign or malignant condition of the tumor. Unfortunately in the vast majority of cases this is impossible even by the expert cystoscopist. The endovesical removal of a piece of the growth for microscopic diagnosis is strongly to be condemned for two reasons: first, it invites metastasis; and second, the piece removed is usually small and taken from the top or side of the tumor and not from its junction with the mucosa, and consequently the pathologic report is valueless. In doubtful cases a very few high frequency applications will determine the nature of the tumor; if no definite beneficial results are quickly manifest the case should be one for radical operation for it is a malignant growth." As for the efficiency of the treatment, he says, "I have never seen a case of true papilloma, whether single or multiple, that was not effectively destroyed by high frequency electro-coagulation; and I have never seen a single case of carcinoma involving the pedicle or bladder wall that was cured by the electric spark."

Keyes in his conclusions puts this first: "Tumors of the bladder must be classified as benign or malignant in accordance with their clinical characteristics, especially with their reaction to the desiccation treatment."

Geraghty's experience has been similar, except that his classification includes what he calls papillary carcinoma midway between papilloma and carcinoma—a group which Thomas and Keyes class with papilloma because the high frequency current is effective against the growths, though slowly. He, too, found that the treatment had no effect upon the true cancer except that the patients were at times made more comfortable. He states unequivocally that high frequency desiccation is the proper treatment for all papillomata.

Buerger, after careful study of one hundred and thirteen neoplasms, takes issue with the widely accepted opinion that the pathologic diagnosis of tumors of the bladder is not reliable. He is willing to go on record as holding the belief that in most cases the acquisition of malignancy from the clinical standpoint goes hand in hand with the appearance of definite histologic changes in the type of growth, and that these should be recognized by the expert pathologist. Frank carcinoma, it is true, can generally be recognized without difficulty. But the benign tumors behave more erratically and they require

unusual expertness in cystoscopic technique combined with expertness in histo-pathology if the pathologic diagnosis is to be relied upon. Incomparably more easy and at the same time more reliable is the diagnosis made by giving a few high frequency treatments.

The plan generally followed, after a vesical tumor has been discovered by means of the cystoscope, is to apply the electrode to the growth until blanching occurs, then apply at another point, etc., continuing as long as the patience of the operator and the victim hold out, or until the tumor is covered. Time must now be allowed for the desiccated tissue to separate and slough away,—this requires from seven to ten days, and another treatment is given. The number of seances will vary with the size and number of the tumors and their susceptibility to the current.

Few if any complications arise as results of this treatment. Chief among them are:

- (1) Hemorrhage when the dead tissue separates.
- (2) Infection—the devitalized and sloughing tissue forms a fine field for bacteria.
- (3) The patient may fail to return for treatment.

Summarizing the many favorable reports and noting an almost entire absence of unfavorable records, two impressions force themselves upon us:

- (1) In fulguration we have a uniformly successful and easy method of treating benign tumors of the bladder.
- (2) It fills a long felt want in the diagnosis of the character of these tumors in which both the clinical and the histologic methods proved unreliable.

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PNEUMONIA IN CHILDREN*

C. W. ROMINGER, M.D., Waukon

It is not my purpose to attempt to exhaustively cover the subject of pneumonia, but touch more or less fully on such special points in its diagnosis and general care in children, as they have presented themselves to me in my practice. The study of pneumonia is especially adaptable to the season, and I trust my brief presentation of this subject may provoke a liberal discussion which shall be mutually beneficial at this time.

The direct ætiological factors of pneumonia are well known, and it remains for us to study each case as an entity and decide as to the causative organism or organisms. Not all acute lung consolidations in children are caused by pneumococci. I have regarded those cases of frank fibrinous pneumonia and those of sthenic primary broncho-pneumonia which follow the course of lobar pneumonia, as of pneumococcus origin. Most low grade pneumonias of both lobar and catarrhal types are infections by either Friedlander's bacillus, influenza bacillus, bacillus catarrhalis, the pus organisms, or are mixed infections, often one or more of these last named with the pneumococcus.

The predisposing or remote causes are multiple. Any condition which lowers the integrity of the respiratory structures, or lessens the individual's constitutional resistance, invites these infections. Poor ventilation in rooms occupied by children by day and night heads the list of this class of predisposing causes. The Chicago Health Department Bulletin speaks of pneumonia as the "Dirty Air Disease." The term is inelegant, but expressive. Children housed in poorly ventilated quarters are very prone to nasopharyngeal disease—rhinitis, sinusitis, pharyngitis, enlarged tonsils and adenoids. They "take cold easily" and often develop pneumonia because the germs have had good living quarters and find conditions favoring their reproduction. Pneumonia infection, as a sequence to other acute transmissible diseases, may be minimized by proper ventilation of the sick room. Measles and whooping cough, because of their bronchial irritation, are most frequently so complicated. Especial attention should be given to these patients to protect them from the dangers of poor ventilation.

From my records of eighty-four cases, nine of whom were adults, there were fifty-three lobar, seven primary sthenic broncho and twenty-three broncho-catarrhal. In forty-six of these my

*Read before the Allamakee County Medical Society.

records are complete—thirty-seven being lobar. Of these, seventeen involved the left lower lobe, eight the right lower, five the right upper, one the left upper and five both lower lobes. Kerley reports a preponderance of right upper lobe involvements, while Holt reports the left lower lobe involved most frequently, with the right upper lobe second.

The time of crisis varied from three days to three weeks (one migratory) and in two there were pseudo crises two days previous to the regular crisis. Of this series, ten had distinct pleuritic inflammation, with empyema resulting twice; eleven showed marked cyanosis previous to the crisis, and two marked pallor and relaxation simulating surgical shock. Rarely in young children is there an initial rigor. In one patient the onset was with convulsions.

A positive diagnosis of pneumonia sometimes presents peculiar difficulties in young children. Not infrequently abdominal tympanites masks a consolidation of a lower lobe. The difficulty in getting a child to inspire deeply often prevents the examiner detecting crepitant rales and slight pleuritic rubs. Frequently consolidation of lung surfaces are delayed—so-called central pneumonia. It is well to cause the child, who usually is apathetic from the toxemia, to cry during the auscultation of the thorax when the lung findings are masked. Regard with suspicion those patients in whom there is pain referred to the tip of the spleen or to the right iliac fossa, with rigidity of the muscles of the abdominal wall of the right and left upper quadrants. This pain may antedate the cough. Pay especial attention to the axillary and the subscapular regions. Carefully weigh disturbances of the normal pulse respiratory ratio.

There is little to be gained in differentiating between frank lobar pneumonia and sthenic primary broncho-pneumonia. They follow the same course, are caused by the same class of organisms, and require the same treatment. Those atypical pneumonias, especially in children of low vitality and low febrile reaction, should be considered separately from the preceding group. In the former our best results are obtained by the so-called cold "fresh air" treatment. The latter do best usually in warmer rooms. Their body temperature and energy are low, and must be spared the depressing effects of the more vigorous measures. Here, too, the question of nourishment is very much more important. Not infrequently marasmus walks away with these little patients. The presence or absence of a lactating mother often determines the outcome.

It is impossible to outline a routine treatment

for pneumonia. Sir James Barr contends that "calcium salts preserve leukolytes, prevent ante-mortem clotting (lessening consolidation) and maintain cardiac musculation." Treatment of pneumonia with calcium salts, gives a mortality of about 7 per cent. C. W. Canan contends that as many children die of portal block as of heart block. That phase is well to consider. Be sure of elimination.

There is little definite data to be found in the literature on this subject regarding serum therapy. Personally, I have had no experience along this line. Rosenow, Billings and others are experimenting with vaccines and serums for pneumonia. The multiplicity of germs present in our cases is the great drawback. By the time autogenous vaccines can be prepared, the patient is usually either safely convalescing or beyond help.

Each pneumonia patient needs a good nurse. If the patient is a child, the nurse should be a specialist in caring for children. We would reluctantly consider caring for a surgical case unless assured that a competent nurse would be in charge. A child ill with pneumonia usually approaches quite as near the brink as do most surgical patients. Too often this arm of the internist is cut off.

The sick room should be capable of free ventilation, without draughts, and separated as much as possible from the living rooms of the family. Visitors should be excluded. A child showing good resistance should be kept in a cold room. A heated adjoining room is advantageous. The patient can be moved to it for bathing, examinations, enemata, etc. Nourishment is very essential. Often forced feeding must be resorted to. These patients can safely be fed somewhat more heavily than the same child would be fed if afflicted with typhoid fever or other gastro-intestinal disease. Drinking water may be given cold and plentifully. Sponging or cool packs, if well borne, should be used when the temperature persists above 102 rectal. Occasionally a child is made nervous or becomes cyanosed by cold applications. In these children I use applications of warm water and alcohol and allow evaporation. Cool rectal irrigations for hyperpyrexia are the most effective and satisfactory in my work. Aconite combined with belladonna may be used when the temperature remains high.

In young children I use quite uniformly aromatic spirits of ammonia, syrup of ipecac, syrup of glycyrrhizæ and syrup of wild cherry, variously combined, adding diuretics and intestinal eliminants as needed. In older children and adults I use ammonium chlorid in place of the

aromatic spirits of ammonia. In a separate mixture I combine strychnia sulphate (small dose) and spartein sulphate and give regularly from the start. Three or four times daily I give camphorated oil by mouth, ten drops to one dram, depending upon the age of the patient. The nurse is supplied with camphorated oil for hypodermic use and such alkaloidal cardiac stimulants as are likely to be needed. Galenical preparations are hardly to be depended upon.

Conservation of cardiac energy is vastly important. That means palatable medicines, a tactful nurse, avoidance of force, recumbent posture when taking food and drink, gentleness with baths (passively given), relief from abdominal tympanites and judicious cardiac stimulation throughout the course of the disease. The physician's personal care during the crisis is often seriously needed.

A complication which has given me most trouble is gastro-intestinal derangement. Quite frequently I have seen follicular and even ulcerative enteritis develop, and be more wearing to the child, weakened as it is, than the primary ailment. If there is a decided tendency to tympany, I crowd alimentary antiseptics and use frequent high colonic irrigations. It is surprising sometimes the amount of mucus which will accumulate in the bowels.

When there is not a regular crisis, or when the temperature recurs after a few days, with local evidence of delayed resolution, I bespeak early exploratory aspiration of the thorax over the area or areas of most marked dullness. An empyema diagnosed reasonably early and treated intelligently is easily corrected and with fair hope of complete recovery. A walled off pus accumulation in either subscapular region is more difficult of diagnosis than in any other location.

At the very onset of this disease, place the child under the most favorable conditions available, secure a good nurse, see the patient often, examine him carefully at each call, avoid forceful procedures, stimulate judiciously before there is a chance of cardiac weakness, ascertain beyond doubt just how much food is given during each twenty-four hours, and be sure it is adequate. Only in this way may we know the progress our patient is making or detect nature's signals for help.

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INDUSTRIAL WELFARE NUMBER OF "THE MODERN HOSPITAL"

The August number of "The Modern Hospital," St. Louis and Chicago, is devoted to a symposium on welfare work among the industrial corporations of the country. There are editorials by those competent to write on this important subject, a great number of papers written by welfare directors in some of the most important industrial corporations, and an immense amount of statistics and figures and facts showing the huge volume of work that the corporations are doing to protect their employes against sickness, accidents, and discontent. The journal contains many illustrations of first aid stations, emergency hospitals, and welfare departments of industrial plants, and many facts that should be of great help to those interested. Among the topics discussed are those of first aid, industrial nursing, lunches and diets for industrial employes, safety devices in factories, and athletic and social clubs for employes. The editors frankly state that they have been unable to obtain figures as to cost of welfare work in the industries, but a number of writers attempt to make deductions and draw conclusions from their experiences of the past few years.

"The Modern Hospital" divides welfare work into three phases:

1. To make employes healthy, comfortable, and happy, in order that they may achieve the highest efficiency in their work.
2. To help employes prepare for the day when they are prevented from being bread winners, so that dependents on them may be provided for in case of sickness or disability.
3. To provide entertainment, recreation, and interesting groupings, in order that the employes of the corporation may have mutual interests which will enhance their loyalty and team-work.

SIR VICTOR HORSLEY, DIED IN MESOPOTAMIA, NOTED FOR HIS RESEARCH WORK

LONDON, July 21.—Sir Victor Alexander Haden Horsley, who is dead in Mesopotamia from a heat stroke, was knighted in 1902 and was widely known for his medical research work. In 1884 he proved by experiment that the disease myxedema was caused by the absence of the thyroid gland and was subsequently rewarded the Cameron and Rotherhill gold medals. He also was known as a writer on medical topics, principally on the nervous system. He was born in Kensington, England, in 1857, and was married to Eldred Bramwell in 1887. He was emeritus professor of clinical surgery and consulting surgeon at the University College hospital.

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PREVENTIVE MEDICINE AND AMERICAN RESEARCH

The London Lancet presents a tribute to American Research in Preventive Medicine in an editorial June 3, 1916. The occasion for this graceful acknowledgment was the appearance of four representatives from the American Army and Navy in Great Britain for the purpose of studying the organization of British medical service in connection with the war. The Lancet says, "We take the opportunity of offering our American brethren in the name of the profession at home a hearty welcome to our shores." The Lancet impresses on its readers the great accomplishments in the field of American preventive medicine and draws attention to the brilliant work of Major Walter Reed and the Assistant Surgeons James Carrol, Jesse W. Lazear and A. Agramonte in investigating and discovering the etiology of yellow fever; how these brave and conscientious men succeeded in freeing Cuba which for 150 years has been the hot-bed of a most pestilent disease, by methods which will remain as a model of scientific research both for the exactitude with which they were adapted to the points to be proved and for the precautions taken to exclude all sources of error. "To their everlasting credit the American soldiers offered themselves fearlessly as subjects for experiment; some of them after being bitten by infected mosquitoes contracted the disease, among them being Carrol and Lazear, the latter of whom died a martyr to science." The editorial goes on to state how

other endemic areas by following the methods of prevention worked out by the American investigators, freed themselves of yellow fever and malarial diseases.

A tribute is paid to Surgeon General Gorgas who associated with Reed in Havanna, carried the methods of preventive medicine into the Canal Zone, made the construction of the Isthmial Canal possible and the Zone a place of health and safety; the investigations of McFadden Thompson into the mysterious disease pellagra; the work of Ashford and others with the assistance of the Rockefeller Foundation; the investigations as to etiology of exanthematic typhus by Goldberger, Ricketts and Wilder; the light thrown on cerebro-spinal fever and epidemic poliomyelitis by American workers and beri-beri by American Army medical officers and others in the Philippines. It is gratifying to know in what high regard our proud English cousins hold American investigators who have contributed so much to the world's welfare. We are sure that acknowledgments so generously offered by the greatest British Medical Journal will be appreciated by American readers and will be a further incentive to continued efforts in all lines of medical work. It is to be profoundly regretted that our own Government and our own people see so dimly what American medical science has accomplished for our country and for the world at large. It is to be regretted that our own Government has so often overlooked our great medical benefactors and has allowed so many medical heroes to pass unnoticed.

It is a source of humiliation that Assistant Surgeon Carrol whose health was undermined by yellow fever contracted in his experimental work and died soon after in Washington in poverty, leaving a wife and children in destitution, a home heavily mortgaged, a foreclosure near at hand only saved by donations from his brother physicians, and finally after much effort a small pension, \$1,500 a year, for his wife. Not long ago we noticed that his old mother was a ward patient in a public hospital in Washington. It is true that an expensive Department of Animal Industry is maintained by the Government at Washington for commercial purposes and a very useful and extremely valuable Marine Hospital and Public Health service, primarily in the interest of trade and incidentally in the interest of public health, is maintained by the government. But an independent Public Health Service in waiting, for how long, no one knows. Great things have been done in the public health service, but by private initiative.

BETTER DOCTORING FOR LESS MONEY

The two papers published in the American Magazine for April and May by Dr. Richard C. Cabot under the above title, have excited considerable comment among editors of medical journals. The logic of Dr. Cabot's argument is generally accepted only that the plan savors of paternalism in medicine which the American medical mind is not yet prepared for. Team work or group practice is generally accepted among the best thinkers as the ideal method of practice and must be adopted sooner or later. Those who have watched the methods at Massachusetts General Hospital are easily persuaded that the ward patients receive the highest skill in diagnosis of disease and efficiency in treatment, this without cost to the patient or salary to the physician. Based on Dr. Cabot's experience in this great institution and the concrete example furnished by the student co-operative arrangement in the University of California for student sickness welfare, he assumes that the same plan could be carried out in cities and towns. Taking the hospital as the center of medical activities, individuals and families could easily contribute to a fund which would pay reasonable salaries to a group of expert physicians to do the work now done in Massachusetts General Hospital for poor patients, and thus furnish the great middle class with similar medical service. It would not seem surprising to us that some day after the working out to a degree of satisfaction the workmen's accident and sickness insurance, that Dr. Cabot's vision of the future would come true. Then will the practice of medicine become a public service in the fullest degree, better compensation to the medical profession, and greater economy to all concerned.

Here and there over the United States are groups of men organized for team work on a commercial basis, each member of the group contributing a part for better and more thorough examinations, diagnosis and treatment, either in privately owned hospitals or in well organized public hospitals. The details of the organizations differ materially, but time and experience will no doubt determine the best. It is a struggle to find more ideal methods of practice than furnished by the method of the individual practitioner.

We were impressed not long ago in reading Adam Smith's "Wealth of Nations" written about 140 years ago. In the first chapter we are told that at that date, one workman could make one pin a day or possibly 20 pins a day of poor quality, whereas 10 men in a small factory—each one

doing his particular part—could make 12 pounds or 48,000 pins of better quality in a day. The number of pins made in one day by 10 men—each doing his part—and the number of pins made by one man working alone are used to illustrate the difference in efficiency, when one man worked alone and when 10 men worked together.

The Providence Medical Journal comments rather unfavorably on Dr. Cabot's views as tending to contract practice and inferentially to lessen the individual appreciation of medical service.

A NEW PHASE IN WORKMEN'S COMPENSATION

It appears in most of the Compensation Acts that the insurance company or the employer is endowed by law with the right to name the physician or physicians who may be called to attend injured employes, and that the injured man is denied the right to select his own or family physician at the expense of the insurance company.

A case which involved part of this question was recently submitted to the Supreme Court of Massachusetts. It appears that an employe of Arlington Mills, Lawrence, developed a hernia on Saturday just before closing time. On the following Monday the injured man called his own physician and on Wednesday was operated. The bill of \$65.00 was referred to the arbitration committee. The committee reduced the bill to \$50.00 and recommended it be paid. There was no dispute as to the reasonableness of the bill or of the value of the services, but it was contended that the company employed two skillful physicians to treat injured employes and had given proper notice of the fact and posted their names in prominent places, and that it was the duty of the injured employes to call one of these physicians, which he neglected to do but called another physician not in the employ of the company. The Supreme Court decided that the insurance company acted wholly with their rights in refusing to pay the bill. The Supreme Court held that an exception might be made in cases of emergency when the services of the Company's physicians could not be secured, when waiting might be attended by serious consequences or where proper notice had not been given. The same provisions may be found in the Iowa law. The Iowa Industrial Commission has placed a liberal construction on this section by holding that if the family physician was skillful and competent to treat the particular class of cases, the employment would be within the spirit of the law. Whether or not the courts would agree to this interpreta-

tion of the law might be questionable; however, the insurance companies with whom we have had conference, have agreed to this interpretation of the Act.

DR. JACOBI'S BIRTHDAY

Dr. Abraham Jacobi celebrated his eighty-sixth birthday anniversary, May 6. A dinner was given in his honor at the Ritz-Carlton by the board of directors of the Hospital for Deformities and Joint Diseases in which Dr. Jacobi has taken great interest from its start in 1907. Contributions of \$112,000 were received toward the \$1,000,000 fund for the institution. Dr. Jacobi was presented with a gold handle cane on behalf of the board of directors by Paul M. Herzog. May 6, Dr. Jacobi was the guest of honor at a testimonial dinner given by the New York Yacht Club at which were present more than twenty physicians who have acted as his assistants in the hospital and college in which he has worked.

DRS. McGUIRE AND MAYO HONORED

At the recent meeting of the Medical Society of the State of North Carolina, held in Durham, Drs. Stuart McGuire, Richmond, Va., and William J. Mayo, Rochester, Minn., were unanimously elected to honorary membership. This is an especial honor in view of the fact that this Society has within the past thirty years elected less than half a dozen honorary members and they, with a single exception, were Carolina doctors removed to other states.

RÖENTGEN RAY LIABILITY—CHANGING PHYSICIANS—EXPERT EVIDENCE

(George vs. Shannon [Kan.], 142 Pac. R. 967)

The Supreme Court of Kansas affirms a judgment against the defendant, a physician, for injury to the plaintiff in the negligent use of Röntgen-ray machine in endeavoring to ascertain whether or not he had a stone in the kidney. The defense was that it was necessary to use the machine, that the plaintiff agreed to it, that if any injury resulted it was on account of the plaintiff's susceptibility to Röntgen-ray action, which could not in the exercise of ordinary care, caution and skill have been ascertained, and that if any burn developed as a result of the operation, it was through the plaintiff's own fault and negligence, and through his failure to follow the instructions to return to the defendant for further treatment.

The court holds that there was no error in an instruction to the jury that if the taking of such pictures in a proper and careful manner does not necessarily result in injury, then the fact injury did result is some evidence (which may be rebutted) that proper care and skill were not exercised. Nor was there error in an instruction that "A physician is not

released from liability for the burning of a patient by the use of the Röntgen-ray by the fact that the patient quit the treatment of the physician after said patient was burned by the use of said Röntgen-ray, and before said physician was willing that such patient should do so, or that said patient neglected to follow the instructions of the physician as to the use and care of the affected parts." The mere fact of discharging a physician or quitting his care and employing another physician by a patient who believes he has been injured by the negligence of the former physician is not in itself evidence of contributory negligence. In other words, the mere fact that a patient discharges or quits the care of his attending physician and employs another physician is not evidence of contributory negligence in an action by the patient against the former physician for negligence in the discharge of his duty to the patient. If any act of the plaintiff had been shown by the evidence to cause an aggravation of the injury, such evidence would probably have been pertinent in mitigation of damages, but the mere fact of a change of physicians did not raise the presumption that damages were increased thereby.

The defendant produced the testimony of a number of physicians, who were Röntgen-ray operators, which tended to show that a burn would not be expected by the use of the Röntgen-ray with less than two or three times the amount of current actually used in this case, as shown by the testimony. On the other hand, there was evidence that the use made of the Röntgen-ray machine and current would be expected in ordinary cases to inflict the burn which the plaintiff suffered. On such conflicting evidence it was the especial province of the jury to determine the fact. This is a question of science in which the average jurymen has no special knowledge to enable him to test the credibility and accuracy of testimony; still it does not follow that the mere number of witnesses on either side determines the preponderance of the evidence.—(The Journal of the American Medical Association.)

THE NATIONAL CONFERENCE OF CHARITIES AND CORRECTION

"As a man's hair whitens and his features become furrowed, his back bent, and perchance his girth unduly expanded, we say 'He shows the marks of time.' Time, however, has nothing whatever to do with such changes."

This incisive attack on the question of "Longer and More Effective Living" was made by Dr. Eugene Lyman Fisk, director of the Life Extension Institute, New York City, in an address before the forty-third National Conference of Charities and Correction at Indianapolis May 10-17. The speaker said that our conception of this question is worthy of the days of scholasticism, and further "If we protect the cells of our bodies from injury or strain, from poison, both internal and external, from starvation and bacterial attack, we shall be able to clip the wings of time."

An unexpected turning of the discussion on this subject into educational channels was accomplished by Professor L. J. Rettger of Terre Haute, Indiana, who claims that the most important factor had been overlooked by failing to make rational use of the public schools. He said: "One cannot overlook the fact that the drunkard, the tramp, and the criminal were for many years under the instruction of our teachers in the public schools."

Under the leadership of Dr. J. N. Hurty of the Indiana State Board of Health and Dean Charles P. Emerson of the Indiana University School of Medicine, five sessions on health subjects were arranged. Beyond these, however, health discussions were sprinkled throughout the entire series of forty-five sessions of the conference. Illustrations of this fact were the striking presentation of the health needs of rural school children made by Dr. Taliaferro Clark of the United States Public Health Service.

The conference at Indianapolis lasted eight days and broke all previous records for size of gatherings of men and women engaged professionally in social work. The main divisions of discussion were upon children, corrections, the family and the community, feeble-mindedness and insanity, health, inebriety, promotion of social programs, public and private charities, and unemployment. The next session will be held at Pittsburgh during the spring of 1917 under the presidency of Frederic Almy, Secretary of the Buffalo Charity Organization Society. Mr. Almy has already announced as the subject for his presidential address, "The End of Poverty."

DR. CHARLES A. WHEATON

The climate of Minnesota seems peculiarly adapted to the development of strong men. Among them particularly was Dr. C. A. Wheaton, of St. Paul, who died April 29 at the age of sixty-three years. Dr. Wheaton was well known to the profession of Iowa, not only as a very able surgeon but a most delightful friend and associate. Dr. Wheaton had the peculiar faculty to draw friends about him and to impress them with the genuineness of his regard. We have so few of Dr. Wheaton's kind that his loss is the more keenly felt.

PERSONNEL MEDICAL CORPS

The following Iowa surgeons are on duty with the Iowa National Guard in Texas.

STAFF:

Major, D. S. Fairchild, Jr.
First Lieut., E. P. Weih.

FIELD HOSPITAL

Major, Thomas Duhigg.
Captain, Donald Macrae.
Captain, Thomas Burcham.
First Lieut., Edgar Earwood.
First Lieut., James Macrae.
First Lieut., James Fettes.

AMBULANCE CORP NO. 1.

Captain, Frank J. Murphy.
First Lieut., Roy Smith.
First Lieut., Frederick Roost.
First Lieut., Carl Bosley.
First Lieut., Ralph Waters.

H. C. DETACHMENT WITH 1ST. INF.

Major, E. L. Martindale.
Captain, Ben Everall.
First Lieut., E. Sheehan.
First Lieut., Kurt Jaenicke.
First Lieut., Harold McWilliams, D. C.

H. C. DETACHMENT WITH 2ND. INF.

Major, Wm. Jepson.
First Lieut., James Gaumer.
First Lieut., Christanson.
First Lieut., Fred Ballard, D. C.

H. C. DETACHMENT WITH 3RD. INF.

Major, Wilbur S. Conkling.
Captain, John Russell.
First Lieut., Rodney Fagan.
First Lieut., Bernard Parker.
First Lieut., Townsend Pearson, D. C.

H. C. DETACHMENT WITH FIELD ART.

Captain, Earl Bush.
First Lieut., Peter H. Schroeder.

H. C. DETACHMENT WITH SQUADRON CAV.

First Lieut., Frank L. Love.

OFFICIAL NOTICE

The Fifth Convocation of the American College of Surgeons will be held at the Bellevue-Stratford, Philadelphia, on the evening of October 27th. The program of the Convocation will be mailed later to the Fellows. Academic costume will be worn.

Opportunity will be offered during the day to the Fellows who have not already done so to sign the Membership Roll.

FRANKLIN H. MARTIN,
General Secretary.

Note—It is advisable to make hotel reservations at this time since the Clinical Congress of Surgeons meets in Philadelphia during the same week.

BOOK REVIEWS

EMBRYOLOGY, ANATOMY AND DISEASES OF THE UMBILICUS TOGETHER WITH DISEASES OF THE URACHUS

By Thomas S. Cullen, M.D., Associate Professor of Gynecology in the Johns Hopkins University. Large Octavo of 680 Pages With 269 Original Illustrations and 7 Plates by Max Brodel and August Horn. W. B. Saunders Company, Philadelphia and London, 1916. Cloth \$7.50 Net. Half Morocco \$9.00 Net.

This magnificent work will find its way into the library of every trained physician and surgeon and every biologist, whether a physician or not.

The distinguished author, so well known for his many original contributions, presents us with a wealth of knowledge on matters so little known to the general physician and surgeon, that we find ourselves lost at the very beginning. The incident which led Dr. Cullen to this exhaustive work on diseases of the umbilicus is well set forth in the Preface.

Chapter one is a beautifully illustrated discussion of the Embryology of the Umbilical Region and chapter two, the anatomy of the same region. Starting with these two admirably illustrated chapters, we are brought to the Umbilical Infections of the New Born. The first sentence is an impressive one. "Until the advent of asepsis, myriads of children succumbed to umbilical infection in a few days or a few weeks after birth."

In this connection the autopsy findings and the tracing of the extension of infection and the involvement of other structures and the character and results of infection receive a full discussion. Following infections comes a chapter on Umbilical Hemorrhage and one on Granuloma of the Umbilicus. When we recall our own experience with these common conditions we appreciate the advantages of a knowledge such as is furnished by the three chapters mentioned.

Several chapters follow devoted to the Reminents of the Omphalomesenteric Duct, including a full resumé of associated conditions, anatomical, pathological and clinical, failure to close, cysts, hernia, polyps, diverticuli, etc. There are three chapters on Umbilical Concretions, Abscess and Paget's disease of the Umbilicus which was first observed and recorded by Fox and MacLeod in 1901. It appears that but few cases of this disease have been observed.

Chapter 18 includes Diphtheria and Syphilis of the Umbilicus. It appears that but two cases of diphtheria have been recorded, and only a small number of syphilis. Chapter 19 relates to the escape of fluids from the umbilicus. In this chapter a rather full account of a case seen by Dr. Cullen with Drs. Smouse, Fay and Priestley at Des Moines, is given, which proved on autopsy to be a case of aneurysm of the abdominal aorta. Apparently a diagnosis could not be made at operation. Several other obscure cases are recited, characterized by fluid discharge from the umbilicus. Three chapters are given on Fecal Fistulæ at the Umbilicus. Discharge of Round Worms and other substances, as for example gall stones. Five chapters are devoted to tumors of the umbilicus, benign and malignant. The remaining eleven chapters consider the Urachus and the conditions associated with it.

The illustrations, the mechanical work, and the make-up of the book is most admirable, and does great credit to the distinguished publishers. We cannot refrain from again expressing our appreciation of this master-piece of medical literature.

THE ART OF ANESTHESIA

By Paluel J. Flagg, M.D., Lecturer in Anesthesia, Fordham University Medical

School, Anesthetist to Roosevelt Hospital, Instructor in Anesthesia to Bellevue and Allied Hospitals, Fordham Division; Consulting Anesthetist to St. Joseph's Hospital, Yonkers, etc. 136 Illustrations. J. B. Lippincott Company, Philadelphia and London. Price \$3.50.

The administration of an anesthetic has now become an art in itself. Until quite recently almost anyone might perform this office, and frequently in earlier days of surgery there was often but little choice; an occasional death was accepted as an unavoidable incident or the penalty of securing unconsciousness by drug administration. Experience, however, showed that improvement in the quality of the anesthetic agent and increased skill in administration could almost eliminate the danger. The anesthesia specialist is the product of careful study of the subject, and now considerable literature has appeared on the different methods of securing anesthesia.

We have before us a new book on the art of anesthesia by one of large experience. The introduction presents a brief history of the use of agents which in some degree lessen the dread and pain of a surgical undertaking; then a consideration of the types of anesthesia. Chapter two, a detailed consideration of a complete general anesthesia, which presents the phenomena of anesthesia; the degree of anesthesia for different conditions requiring anesthesia; the observations and precautions to be made; the posture with illustrations; relaxation and control of relaxation; maintenance of anesthesia; recovery, etc. Chapter third, "The Signs of Anesthesia," the respiration, color, muscular, eye and pulse, each of these signs are considered in detail. Chapters six to nine inclusive, consider in detail ether, chloroform and nitrous oxide anesthesia. Under anesthesia, is considered the open drop and the semi-open drop method and the closed drop method. Each method has its advantages and disadvantages, which are to be determined by the experience of the administrator and the stage and object of the anesthesia. The author favors the closed drop method for persons beyond seven years of age. This accords with the views of Henderson and other high authorities. The author describes various forms of apparatus which work more or less automatically, but for ourselves we prefer a simple mask with towels to hold in the vapor as may be desired. Considerable space is given to unusual methods of administration, as the intrapharyngeal and intratracheal, with illustrations of apparatus.

Choloroform receives considerable attention, but is not to be recommended except rarely. Considerable space is given to nitrous oxide and nitrous oxide oxygen and ether anesthesia, which the author appears to favor. Personally we do not favor this form of anesthesia, and if it is used it should be in the hands of a highly trained operator.

A few pages are given to Crile's combined anoci-association method.

Three chapters are devoted to local anesthesia.

A chapter is given to Preliminary Medication in

Anesthesia, and another chapter to Post-operative Treatment of the Patient.

Chapter sixteen, Carbon Dioxide and Rebreathing.

Chapter seventeen, Emergency Anesthesia.

This book of 340 pages gives a very complete exposition of the subject of anesthesia, and should be read by the non-expert anesthetist as a helpful and safe guide.

THE MEDICAL CLINICS OF CHICAGO

Volume 1, No. 6, May, 1916. Published By-Monthly. By W. B. Saunders Company. Philadelphia and London. Price Per Year \$8.00.

The first clinic of this number is by Dr. Walter Hamberger on the Allen treatment of diabetis, so well known as the fasting-treatment worked out so exhaustively in the laboratory by Dr. Allen. Dr. Hamberger makes observations based on fourteen cases treated by this method. Dr. Tivneu follows with a clinic on Metastatic Infections of the Upper Respiratory Tract.

Chronic Pain in the Right Iliac Fossa is the subject of discussion by Dr. J. C. Friedman, always interesting because of the number of things which may happen here.

Dr. Williamson at Cook County Hospital gives a clinical lecture on "Hanot's Disease" which appears to be a combination of a symmetrically enlarged hardened liver with an enlarged spleen, fluctuating jaundice, absence of ascites and irregular temperature. An interesting and rare disease, occurs in young persons not connected with alcohol and not dangerous to life.

Dr. Ralph C. Hamill at Westley Hospital presents a case of Traumatic Neurasthenia with the history and symptoms that usually go with this class of cases. The discussion is of unusual interest and points out the discouraging facts so often encountered in the management of the patients who have litigation before them.

Doctors Preble, Mix and Tice present series of interesting cases with many valuable suggestions as to diagnosis and treatment.

BLOOD-PRESSURE; ITS CLINICAL APPLICATIONS

Second Edition, Revised and Enlarged.

By George W. Norris, A.B., M.D., Assistant Professor of Medicine in the University of Pennsylvania; Visiting Physician to the Pennsylvania Hospital; Assistant Visiting Physician to the University Hospital; Fellow of the College of Physicians of Philadelphia. Octavo, 424 Pages, With 102 Engravings and 1 Colored Plate. Cloth \$3.00 Net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

Another book on blood-pressure comes to us for our consideration written by one high in authority on this important subject. It has come to be realized

that the study of disease by blood-pressure means is not so easy as it was at one time supposed. It is also realized that there are many elements of error to be taken into account and that it is not a simple matter to interpret the findings. Our own observations are to the effect that special training is necessary under a master to become expert in the use of the sphygmomanometer the same as in the use of the microscope in the laboratory or the X-ray; among the books for study and reference, one of the very best is Norris.

The first five chapters are devoted to a study of instruments and methods of blood-pressure and the remaining twelve chapters to the application of blood-pressure to disease.

United States Public Health Service Exhibit. At the Panama-Pacific International Exposition, San Francisco, 1915. By W. C. Rucker and C. C. Pierce. Government Printing Office, Washington, D. C., 1916.

THE CRADLE OF AMERICAN MEDICAL EDUCATION

Sometime since attention was called elsewhere to the proposed amalgamation of the two largest and oldest medical institutions in Philadelphia, the Jefferson Medical College and the University of Pennsylvania School of Medicine. That so formidable a step in medical advancement was about to be taken was heralded broadcast throughout medical circles and the news was received by the profession with various grades and degrees of enthusiasm.

The plan of arrangement for coalescing these great medical institutions is unique in American medicine. In the strictest sense, the proposed union is but a partnership, not a merger, since in no way is the ownership or physical control of property, administration of endowments, or election of corporate officers to be altered or curtailed. Each corporation is to preserve all its individual traditions, but proposes to enter into a joint and equal compact whereby a medical school is to be conducted which shall, without discrimination of any kind between them, equally and solely represent both.

This would mean of course the establishment of a single medical school with a single medical student body, the individual members having equal rights and privileges with uniform regulations governing them and without discrimination of any kind among them.

The two faculties are to combine to form one faculty in the new school, and to issue one diploma, one circular announcement, to have one standard of admission, one set of rules for promotion and graduation and one commencement for all students, with absolutely uniform records and regulations governing them.

The name of the new medical institution, now in its nascent state, is to be known as "The Medical

School of the University of Pennsylvania and the Jefferson Medical College of Philadelphia." It is indeed singularly fitting that these great institutions of medical learning, each enjoying a national and international reputation, should be the pacemakers for greater and larger things in American medicine.

For many years the City of Brotherly Love has enjoyed the unique distinction of being the recognized medical educational center of this country. This prestige is well merited since the University of Pennsylvania is the oldest medical school in America, while the Jefferson Medical College for a considerable length of time has had the distinction of being the largest, as regards matriculants, in the United States.

While the proposed plan of the new school as outlined elsewhere in the Journal may, for reasons inherent in the institutions themselves, be somewhat slow in materializing, yet there can be no question but that the consummation of a partnership agreement between the University of Pennsylvania School of Medicine and the Jefferson Medical College of Philadelphia would place American medicine on a plane not heretofore attained.

IOWA ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS CAMPAIGN FOR MEMBERSHIP

A communication has been sent to about twenty-five hundred physicians in the state by Dr. John H. Peck, Secretary of the Iowa Association for the Prevention of Tuberculosis, inviting them to become members of the Association. He called their attention to the fact that the success of the anti-tuberculosis work in Iowa will depend very largely upon the support of the physicians, such support to take the form of moral endorsement of the activities of the Association, which was organized last October, and participate in the expense of the work.

The principal object of this Association is the control of tuberculosis by city and county government through the employment of public health nurses and the construction of sanatoria. In many states these have proven valuable instruments for physicians to make use of to save the lives of tuberculous patients. There are at least fifteen thousand tuberculous people in Iowa.

The work of the Association is financed by membership dues and the sale, at Christmas time, of Red Cross seals. The regular membership dues are \$1.00 per year, or one may become a life member upon payment of \$15.00 in lieu of annual dues.

The certificate which the Association issues is in very good taste and suitable for display in a physician's office.

The Board of Directors of the Association consists of about seventy-five members, half of whom are leading physicians and the other half prominent lay citizens of Iowa.

The Association is offering certain literature to members, as described on advertising page xvi.

ANNUAL MID-SUMMER MEETING OF THE AUSTIN FLINT-CEDAR VALLEY MEDICAL SOCIETY, IOWA FALLS, JULY 11 and 12, 1916

The society convened in the Methodist Episcopal church, Iowa Falls, at one o'clock, July 11, with President, Dr. T. U. McManus, of Waterloo, presiding.

After the reading of the minutes of the last two meetings, the following scientific program was given.

Mr. Wm. Holst, deputy revenue collector of Omaha, Nebraska, gave a talk on Questions Arising under the Harrison Anti-Narcotic Law. After elucidating different points in connection with this law, Mr. Holst answered many questions from the members present.

Dr. R. S. McCaughey of Mason City read a paper on Enteritis. Paper discussed by Drs. Day and Classen with closing remarks by Dr. McCaughey.

Dr. D. C. Balfour, of Rochester, Minn., gave a talk on The Spleen and Some of Its Surgical Aspects. Discussed by Drs. Graham, Ward and Cobb with closing remarks by the essayist.

Drs. McBurney of Belmond and Stuart of Nashua being absent, the titles of their papers were read and passed.

The meeting was then adjourned until nine o'clock the next morning, and an automobile ride was enjoyed by the members present. The many beauty spots in and around Iowa Falls were visited until seven o'clock, when a banquet was served in Caroline Hall at the college.

Wednesday, July 12

Meeting called to order by the president at 9:30

Dr. W. M. Shirley of Carroll read a paper on Acidosis as a Surgical Complication. Paper discussed by Drs. Littig and Shirley.

Dr. A. G. Fleischman of Des Moines read a paper on Renal Infections and Their Treatment.

Dr. C. M. Wray of Iowa Falls read a paper on Tuberculosis of the Kidney.

These last two papers were discussed by Drs. Littig, Lewis, Graham, Kenefick, Day, Marston, Brinkman, Kern and Gernsey, Drs. Fleischman and Wray closing the discussion.

Dr. H. H. Ennis of Baxter read a paper on Reflexes of the Appendix. Discussed by Drs. McCaughey, Ward, Pepper and Gernsey, Dr. Baxter closing the discussion.

Dr. L. A. Dickman being absent his paper was read by title and passed.

Wednesday Afternoon

Dr. D. W. Ward of Oelwein read a paper on Some Remarks on Present Day Surgery of the Abdomen. Discussed by Drs. McCaughey and Ward.

Dr. W. E. Patterson of Waterloo read a paper on The Submucous Resection of the Septum. No discussion.

Dr. Dean Lewis of Chicago read a paper on Chronic Cystic Mastitis. Discussed by Drs. McCon-

nell, Ward and Graham, with closing remarks by Dr. Lewis.

Dr. T. F. Thornton of Waterloo read a paper on A Review of the Literature on Sliding Hernia With a Report of a Case of Double Sliding Hernia. Discussed by Drs. Brinkman, Chas. Ryan, Classen, the essayist closing the discussion.

Dr. L. C. Kern of Waverly read a paper on A Plea for Early Diagnosis of and Surgical Treatment of Gall-Bladder Disease. Discussed by Drs. Shirley, Brinkman and Ward, Dr. Kern closing the discussion.

At the business session which followed the following officers were elected for the coming year. President, Dr. N. Schilling, New Hampton; vice-president, Dr. L. C. Kern, Waverly; secretary, Dr. A. D. McKinley, Lawler; treasurer, Dr. C. H. Cretzmeyer, Algona; member of Board of Censors for three years, Dr. T. U. McManus, Waterloo.

The following applicants were elected to membership: Dr. H. W. Clasen, Shell Rock; Dr. Oliver J. Fay, Des Moines; Dr. R. M. Wallace, Titanka; Dr. Guthrie McConnell, Waterloo; Dr. G. E. Schnug, Dows; Dr. Cecil C. Grant, Hudson; Dr. T. J. O'Toole, Eagle Grove; Dr. John R. Christensen, Eagle Grove.

Charles City was chosen as the place to hold the autumn meeting of the society, which will be held Tuesday, November 14, 1916.

A. D. McKinley.

SOCIETY PROCEEDINGS

The Clinton County Medical Society met at Clinton, July 6th. On this occasion the society had as its guests at dinner at Hotel LaFayette, Drs. H. J. Prentiss, H. L. Beye and C. J. Rowan of the State University. The subject presented at this meeting of the society was Infections of the Hand. Dr. Prentiss discussed the anatomy of the hand; Dr. Beye presented the diagnosis of hand infections and Dr. Rowan closed with the surgical treatment of these conditions.

Dr. D. S. Fairchild led in the general discussion that followed.

At the meeting of the Cedar County Medical Society held at Tipton, July 13th Drs. Prentiss, Beye and Rowan, of the State University faculty, discussed the subject of Infections of the Hand, presenting the subject in its various phases in a very thorough manner.

The Davis County Medical Society met at Pulaski, July 18th. The following program was carried out: Some Phases of Unpreparedness—H. C. Finch, Pulaski.

The Present Venereal Propaganda—A. G. Fleischman, Des Moines.

Bacteria or Serum Therapy for the Cross-road Doctor—J. L. Saar, Cantril.

Chronic Bronchitis and Asthma—J. A. Replogle, Udell.

The County Hospital—C. A. Boice, Washington.

Dinner was enjoyed by the guests, members and their wives at the Pulaski Hotel.

The Dallas-Guthrie County Medical Society, at its meeting held July 20th at the Arlington Hotel, Adel, had the following program:

Care of Mother During Pregnancy—W. M. Thornburg.

Surgical Complications of Pregnancy—J. W. Harrison.

Obstetric Analgesia—B. H. Sherman.

After Care of Mother—C. O. Sones.

The July meeting of the Greene County Medical Society was held at Head House, Jefferson, the 14th. Dr. G. W. Kester, of Grand Junction, read a paper on Infant Feeding, and Dr. A. I. Reed, of Grand Junction, had a paper on Typhoid Fever.

The thirty-third semi-annual meeting of the Iowa County Medical Society was held July 25th at Millersburg, and was one of the most enthusiastic and best attended meetings in the history of the society. The representation included every town in the county and several of the towns in Keokuk county. Dr. A. H. Beifeld, of Iowa City, was the guest of the society, and read a paper on Diseases of the Colon in Infants and Children. C. F. Noe, of Amana, reported a case of Thyro-Glossal Cyst. P. H. Giblin, of Williamsburg, read a paper on Latest Treatment of Pyorrhea Alveolaris. Some Interesting Points About Small-Pox was the subject of a paper by F. C. Schadt, of Williamsburg. Much of the success of this gathering was due to the efforts of the society's president, L. B. Amick, of Millersburg.

At this meeting fitting resolutions were passed on the death of two of the members, Dr. E. B. Henderson of Marengo and Dr. G. F. Schug of Williamsburg.

The Marion County Medical Society met at Knoxville, July 7th, with four guests and twelve members present. Dr. C. G. Smith, of Granger, councilor for the seventh district, was one of the guests. Following the scientific program, the members with their guests adjourned to the Mandalay Club House on the Des Moines river where a buffet luncheon was served.

A joint meeting of the Keokuk and Poweshiek County Medical Societies was held at the Commercial Club, What Cheer, August 1.

The program was as follows:

Treatment of Pneumonia—R. F. Gunn, Deep River.

Diseases Simulating Appendicitis—E. B. Williams, Montezuma.

Public Health Problems—C. E. Harris, Grinnell.

Diagnosis of Cardiospasm of the Esophagus—M. B. Galloway, South English.

Some Illustrative Cases of Bone Surgery—C. J. Rowan, Iowa City.

Cholecystitis in Typhoid Fever—E. F. Talbott, Grinnell.

The visiting physicians were entertained at luncheon by Dr. C. B. Taylor, and a reception was tendered the ladies by Mrs. Taylor.

The Iowa Medical Union Society held its annual meeting at the Montrose Hotel, Clinton, July 11th. Dr. Henry F. Helmholtz, assistant professor of Pediatrics, Rush Medical College, was a guest of the society, and gave a paper on Pyelocystitis. Other papers read at this meeting were: Treatment of Naevus, A. W. Erskine, Cedar Rapids; Fracture of the Femoral Neck, C. E. Ruth, Des Moines; Difficulties in Diagnosis, J. F. Herrick, President of Iowa State Medical Society, Ottumwa; Torsion of the Omentum, with report of a case, C. L. Heald, Cedar Rapids.

Iowa and Illinois Central District Medical Association met at Outing Club in Davenport for annual session on the afternoon of July 13th. Attendance was good. The day was excessively warm and it is to the credit of both speakers and audience that attention held steadfast through repeated calls for a closed room and lantern demonstrations. The program was:

1. President's Address—C. S. Young, Geneseo.
2. Vincent's Angina—Lee Weber, Davenport.
3. Modern Treatment of Nephritis—C. P. Howard, Iowa City.
4. Specific Medication—F. H. First, Rock Island.
5. Fractures of the Os Calcis—P. A. Bendixen, Davenport.
6. Lantern Slide Illustrations of Cystoscopic Work—Bransford Lewis, St. Louis.
7. Hunger in Health and Disease—A. J. Carlton, Chicago.
8. Some of the Principles Involved in the Treatment of Patients Suffering from Obstructing Enlargement in the Prostate—E. S. Judd, Rochester.

The major portion of the time was consumed by the four visiting speakers, each of whom delivered a real message.

C. P. Howard dealt with both prophylactic and active treatment of nephritis; the former including elimination of infection focal points, support to heart and kidneys through acute infectious attacks and general hygiene, the latter by means of thorough attention through all attacks of acute nephritis. In active treatment Howard removes the causal infection or irritant and then prescribes rest, low protein diet, and salt restriction, as indicated by continuous observation of the urinary output. Ingestion of fluids is left largely to the patient's desire, but elimination is supervised. He sometimes finds vasodilator drugs indicated for the control of blood-pressure. Bransford Lewis stated that prostatectomy cannot be intelligently performed without previous

determination by cystoscope of the character of the urethral obstruction in the individual case. There is no other method of diagnosis in numerous vesicular and ureteral local lesions. Lithotomy is very frequently rendered unnecessary by the removal of calculi from both bladder and ureters through the cystoscope itself. Lewis captures ureteroliths from great distances, even approaching to the pelvis of the kidney, by this method. Cystoscopy constitutes a specialty.

A. J. Carlton's dissertation was a resume of much personal work in research physiology. Hunger contractions of the empty stomach are registered by impulse on an inflated balloon carried to a manometer drum, the results in the normal being proven by comparison with a control young man wearing a permanent gastrotomy wound. Carlton proves the muscular activity of the empty stomach to be greatly in excess of that of the full stomach. This work has value in correcting our general misapprehension concerning relative activities, although the end, as yet, has not been accomplished.

E. S. Judd shows by lantern slides various forms of prostatic urethral obstruction and some distinguished technique of prostatectomy. He emphasizes the importance to the patient of a normal residual urine and demonstrates a physiologic lowering of blood-pressure by a pre-operative correction of faulty residuum. Patients in whom residual urine is gradually withdrawn over a period of several weeks make good operative recoveries while patients of the same class deprived suddenly of all residuum fail to compensate.

Dinner was served at 5:30 P. M. and was followed by election of officers: President, D. S. Fairchild, Clinton; vice-president, L. Ostrom, Rock Island; secretary, L. W. Littig, Davenport; treasurer, F. H. First, Rock Island; reporter, W. D. Chapman, Silvis, Illinois; censor, L. C. Moore, Reynolds, Illinois. Semi-centennial celebration of the society will be enjoyed August 15th at the Blackhawk Watch Tower, Davenport. W. D. Chapman.

The August meeting of the Southwestern Iowa Medical Society was held at Clarinda the 3rd. At this meeting, Dr. C. A. Boice, of Washington, gave an account of the Results of Four Years' County Hospital Work. Dr. C. B. Burke, of Atlantic, read a paper on The Importance of Making a Careful Examination for Syphilis. Dr. D. C. Brockman, of Ottumwa, also read a paper.

The afternoon session was held at the state hospital where Dr. Max Witte addressed the members of the society and their guests on the subject Insanity and the General Practitioner. Following the address, Dr. Witte gave a Psychiatric Clinic.

In the evening, the public were invited to hear an illustrated lecture at the library by Dr. F. E. Sampson, of Creston, on The Economic Value of Health and Some of the Means by which to Obtain it.

The society was entertained by the staff of the state hospital.

MARRIAGES

Dr. Wm. W. Larsen, to Miss Ellen C. Bolser, both of LeMars, July 19th.

Dr. Wm. A. Seidler, of Jamaica, to Miss Ethel N. Knapp, of Colfax, June 29th.

BIRTHS

Dr. and Mrs. T. M. Redmond, of Monticello, July 15th, a daughter.

Dr. and Mrs. A. P. Maloney, of Fonda, July 6th, a daughter.

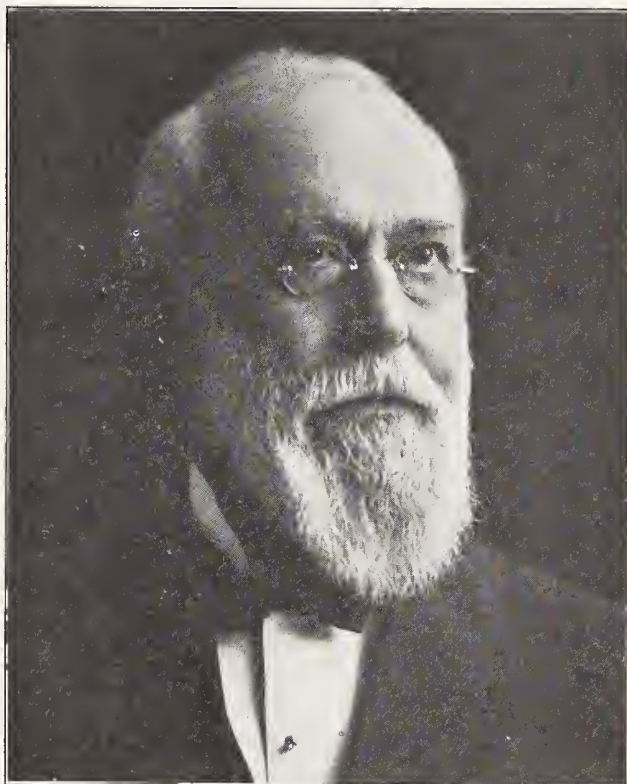
Dr. and Mrs. C. W. Losh, of Des Moines, July 10th, a son.

Dr. and Mrs. W. R. VanDuzer, of Casey, July 8th, a daughter.

DEATHS

John Alexander McKlveen, M.D., Iowa and the medical profession have been deprived of a man who for years ranked as one of our state's leading citizens and a true disciple of Aesculapius. It is with deep regret that we are called upon to record the death of Dr. John Alexander McKlveen, of Chariton, who passed away at his home on the morning of July 16th from an attack of cardiac asthma, at the ripe age of eighty years, seven months and eighteen days. Although in failing health for some time the doctor's demise, while rather sudden and somewhat unexpected, came peacefully and quietly. In the death of Dr. McKlveen, Lucas county loses one of her oldest practicing physicians, a loss alike keenly felt by the local profession and the many homes long accustomed to his visits of mercy. It was a privilege of the writer throughout his boyhood days to have known Dr. McKlveen and later to have met with him in consultation at the bedside. Nothing but good can be gainsaid of our brother who has finished his course honorably and uprightly. John Alexander McKlveen was born in Westmorland county, Penn., November 28, 1835. He received a public school and academic education, taking his first course of medical lectures in 1860 at Cincinnati, and engaged in the practice of his profession for two years at Pleasant Unity, Penn. He continued his lectures in Bennett Medical College of Chicago, receiving his degree from that institution in 1872. He was entirely self dependent from the age of fifteen, paying his own way through college. He came to Iowa in 1865 locating at Chariton, where he practiced continually for fifty years, until within a few months of his death. Dr. McKlveen was the oldest physician of Chariton in years of continuous practice. He was railway surgeon for the C. B. & Q. railroad company for twenty-four years, holding this position at the time of his death. He was president of the Board of Examining Surgeons for Pensions during Harrison's administration, and also served as president of the Iowa State Eclectic Medical Society

for three terms. Dr. McKlveen was appointed a member of the Iowa State Board of Health by Gov. Shaw for a period of seven years, serving as president of that body a part of the time. In 1901 he



was sent as a delegate from the State Board of Health to London to attend the British Congress of Tuberculosis. He also served as senator from his district in the Thirty-Second General Assembly.

Edward James Gable, M.D., age forty-nine, College of Physicians and Surgeons, Keokuk, 1896; a practicing physician at New Albin; while returning from a night call in the country was fatally injured when his automobile plunged over an embankment, pinning him beneath the car.

George F. Schug, M.D., Jefferson Medical College, 1904; member of the Iowa State Medical Society; a practicing physician at Williamsburg; died at Rochester, Minn., July 22nd, following an operation for appendicitis. At a meeting of the Iowa County Medical Society at Millersburg, July 25th, the following resolutions were passed:

Whereas, The Iowa County Medical Society hears with unfeigned regret of the death of one of its most valued members, Dr. G. F. Schug. In the death of Dr. Schug the society suffers a distinct loss and the community, in which he so conscientiously labored, a real friend and adviser. In his eight years' practice in Iowa county, his conduct was in strictest accord with the ethics of the profession he so singularly honored by his response to all calls from the suffering or distressed;

Resolved, That his memory shall always remain for his co-workers as an inspiration to attain the high ideals he ever courted;

Resolved, That we extend to the bereaved wife and baby of our departed brother our heartfelt sympathy in this their hour of stress and sorrow.

J. L. AUGUSTINE,

F. C. SCHADT,

A. R. MOON,

Committee.

David W. Edgar, M.D., age sixty-nine; Rush Medical College, 1874; formerly a practicing physician at Fonda; recently removing to Ames; died suddenly from heart disease while crossing the college campus in his automobile July 8.

John Hermann, M.D., age fifty-six; Chicago Homeopathic Medical College, 1889; one of the founders of the German Lutheran Hospital of Sioux City; a native of Iowa, born in Dubuque county; a practicing physician for nearly thirty years at Sioux City; died at his home in that place, after a lingering illness from heart disease, July 10.

Ulysses G. Grigsby, M.D., age forty-six; Eclectic Medical College, Cincinnati, 1896 formerly a practicing physician at Gilmore City and Humboldt, the past eight years at Perry; died at his home in Perry, July 25 from internal injuries received July 20 in an automobile accident.

CHANGES OF LOCATION

Dr. R. D. Taylor, of Algona, has removed to Spencer. Dr. H. F. Kiesling, of Creston, succeeds Dr. Taylor as assistant to Dr. M. J. Kenefick at the Algona hospital.

Dr. A. E. Reiter, of Everist, has located at Melcher.

Dr. Sumner B. Chase, eye, ear, nose and throat specialist, of Iowa City, has removed to Fort Dodge.

Dr. F. H. Fillenworth, of Ossian, has sold his practice to Dr. J. W. Lynch. Dr. Fillenworth is a member of the hospital corp of the Iowa National Guards.

Dr. C. A. Mackey, of Centerville, has removed to Clio.

Dr. R. C. Sebern, of Odebolt, has sold his practice. After post-graduate work in Chicago, Dr. Sebern will be associated with Dr. J. B. Naftzger, of Sioux City.

Dr. F. L. Rabe, of Ackley, has returned to Marshalltown to locate permanently.

Dr. G. S. Millice, of Castana, has removed to Cushing.

MEDICAL NEWS

Dr. C. M. Porter, of Colfax, has leased the Victoria Sanitarium of that place.

Dr. W. R. Arthur, of Hampton, recently underwent an operation for appendicitis.

Dr. Nelson Merrill, of Marshalltown, recently underwent an operation for appendicitis.

Dr. Ward Hannah, of Webster City, suffered a

fracture of the right arm while playing tennis recently.

Dr. F. S. Bonnell, of Fairfield, spent the month of July in St. Louis taking special work on the accessory sinuses of the nose.

Dr. F. W. Dixon, of Louisville, Ky., has been appointed assistant surgeon of the Soldiers' Home at Marshalltown to succeed Dr. H. A. Newell resigned.

Dr. F. L. Vander Veer, of Cedar Falls, sustained two fractured ribs and numerous bruises when his automobile was struck by a freight train at a crossing near Cedar Falls.

HOSPITAL NOTES

Impressive ceremonies marked the laying of the corner stone of the new Cherokee County Hospital, at Cherokee—the Sioux Valley Hospital, July 23. The honor of laying the corner stone was bestowed upon Dr. Edward Hornibrook, not only the pioneer physician of Cherokee, but the dean of the medical profession of northwest Iowa. The address was given by Dr. E. E. Munger, of Spencer, a strong advocate for the county hospital movement in this state. Beginning August 2, 1915, a six weeks' campaign was conducted for raising the necessary funds. Thirty-five thousand dollars, the amount needed for construction, was subscribed during this time.

GOLDEN JUBILEE BATTLE CREEK SANITARIUM

Names sometimes designate without adequately describing. Such is the case with the Battle Creek Sanitarium which will celebrate the fiftieth anniversary of its founding on October 3, 4 and 5. This institution is a sanitarium, with all the most modern and scientific equipment for diagnosing and curing disease. But it is much more. From its inception, it has been in the forefront of the movement for natural, rational and physiologic methods in the treatment of the sick. Primarily, indeed, its function has been educational—the teaching of right principles of living as not only aiding in curing sickness but preventing its return as well. The sanitarium therefore has taken an active and a leading part in movements for public sanitation, for diet reform, to curb the liquor evil, to check tuberculosis, to abolish child labor and more especially to study tendencies toward race degeneracy and to point out eugenic and other remedies for them.

Being purely a charity, and having no dividends to pay to stockholders, it has been able in the half century of its existence to spend over \$1,400,000 for the care of the indigent sick.

The program for the celebration includes a huge banquet, receptions, a big outdoor spectacle, a street pageant, with historical and allegorical floats, a race betterment exhibit, conferences on child labor, eugenics, tuberculosis and other social and medical problems of the day, with numerous speakers of prominence, and a health chautauqua.

All physicians are invited to come.

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SIGNS OF THE TIMES*

L. L. HENNINGER, M.D., F.A.C.S., Council Bluffs

Once in twelve months it has been the custom for the members and those especially interested in the work of the Ophtho-mo-Oto-Laryngologic Section of the Iowa State Medical Society, to cast aside the cares and worries of office routine for the day and to meet together at an appointed place to exchange ideas and experiences and to discuss topics pertinent to the interest of the individual members, and helpful to the furtherance of scientific knowledge pertaining to the practice of the specialty.

So we are assembled here today for a common purpose. It is with no little pride and pleasure that I occupy this chair of honor, and I assure you that no product of my pen can express to you the peculiar measure of my appreciation of the honor bestowed. I trust that our efforts to make this program a creditable one will be rewarded by your approval in the same measure that we have labored to make it a success.

By way of prelude to my rambling remarks, allow me to warn you against a feeling of disappointment should the thought in this discourse fail to coincide at many points with what might be expected from the printed title in the program.

The achievements in the field of medicine and surgery, and especially that branch designated by Ophthalmology and Oto-Rhino-Laryngology, in the past few years is gratifying, and justifies the feeling of optimism that pervades as regards the future of the profession. The work of such men as Lister, of Pasteur, of Ehrlich, and of numerous others probably equally brilliant, but the enumeration of the names of whom has no part in this paper, are significant of the spirit of progress and serve as mile posts to mark the steady onward movement. In reading the history of the development of the science and the profession, it cannot but be a source of gratification that it is a progressive movement. It is the high ideals

and the capacity for boundless work that permeates those in the forefront,—the original investigators,—that makes stagnation impossible. Vague theories and more or less crude methods have by degrees given way to modern methods of "rule by reason." A scientific diagnosis today entails accurate knowledge of anatomy and a familiarity with laboratory technique that has been wonderfully perfected in the space of the last few years, to say nothing of the powerful ally that we have in the achievements of modern röntgenology. The utility of the latter as a diagnostic aid in sinus and mastoid pathology, cannot be over-estimated. And let it not be assumed that perfection has been reached. We live in an age of progress. Some one has not inaptly said, "In science as in art there may be pause, but there can be no finality." It is fortunate for the medical fraternity that it is so. Stripped of all hope of original work and the spur of ambition to excel, we would retrograde to a level of sordid commercialism,—a state or condition to be deplored and one absolutely incompatible with the best interests of the profession.

A significant sign of the times is manifested in the gradual elimination of medical sects and the elevation of educational standards. The increasing high plane of requirements for entrance to the medical courses in our universities is bearing fruit in eliminating from the field the unlettered and the untrained mind which is incompatible with accurate, scientific work in which he is to engage. The standardization of requirements will eventually bring all schools up to an infinitely higher level of efficiency. And rigid enforcement of the same is making existence impossible for the inferior medical school. Thus we are supporting fewer but better medical schools. The process of elimination continues. The old law of survival of the fittest still obtains, and who can foresee what the end will be? Again, the tendency to lengthen the medical term to five years is in the right direction, as is also the practice recently becoming more popular of securing hospital service of from one to two years subsequent to graduation. Especially is this the case

*Chairman's Address, Section on Ophthalmology, Otology and Rhino-Laryngology, Sixty-Fifth Annual Session, Iowa State Medical Society, Davenport, May 10, 11, 12, 1916.

for those who wish to specialize,—really specialize. We are not taking into account the precocious ones who bloom over night or at best are in full bloom after a six weeks course in some post-graduate school.

All schools are devoting more time to ophthalmology and oto-laryngology as the scope and importance of this special work increases. The rapid strides forward in this particular branch has made this imperative. Some universities are proposing and even adopting the establishment of a special two years post-graduate course along the special line of ophthalmology and oto-laryngology. It goes without saying that these courses would be optional and the degree conferred according to the particular work completed. For instance, "Master of Ophthalmology," "Master of Oto-Laryngology," etc. By this means we could create a standard to which all persons aspiring to the degree or title of "specialist" would have to conform. It would be a safeguard to the public against the quack and the charlatan whose chief assets are an appropriated specialist's title and unlimited nerve.

Speaking of preparedness, it would seem appropos at this time in view of the chaotic state of affairs in most of the erstwhile European medical centers, to speak of the duty of America to look after the training of men in special work. As in the matter of trade and commerce, so in the field of this special medical training, now would seem to be our opportunity to assume a task which has formerly been largely relegated to our foreign brothers. The opportunity now afforded for this country to place itself at the forefront in all departments of scientific medicine should not be lost.

One of the hopeful signs of the times is the general interest being manifested in the public health and hygiene. The prevention of disease has received a powerful impetus in the establishment of medical inspection of school children. Especially does it furnish the specialist a splendid field for statistical study and observation along the lines of prophylaxis. It unquestionably will add to the efficiency of the public school, and by the statistical knowledge gained, be of aid to science.

I cannot close this brief address without alluding to a topic, the consideration of which I deem of vital importance to the medical profession in general and the specialist in particular. I allude to the insidious evil of commercialism in the profession. To make human life and health the subject of barter and trade by enlightened and otherwise seemingly model citizens, is beyond my comprehension. It is only through ignorance

of the public of what is taking place, that such a condition can continue, and the solution is logically through publicity. The American College of Surgeons is to be commended for its stand in this matter, and its vigorous campaign for the solution of the problem is to my mind one of the very hopeful signs.

The encouraging outlook for the betterment of existing conditions and for the favorable solution of the problems now engaging our attention, is conducive of optimism.

On an occasion like this there is much that one would like to say on many subjects pertinent to the profession, but time limits me to these few. I thank you for your indulgence in listening thus far. As members of the medical profession the furtherance of the welfare of the Society and of the medical profession in general should be our ambition,—efficiency in rendering skilled service to the unfortunate sick, our watchword.

PRACTICAL POINTS ON REFRACTION*

F. W. DEAN, M.D., F.A.C.S., Council Bluffs

Comfort to the wearer is the desire of the ophthalmologist in his refraction work. How best to attain this is some times brought up in societies but where it is, the discussion usually revolves around the questions of mydriatics. A listener would surely be led to believe that if one were able to decide upon the right mydriatic he would at once become a master of refraction. I have practiced ophthalmology in my present location twenty years, have had an opportunity of watching the results of my work and naturally have arrived at conclusions on some points.

My purpose is not to present for discussion the whole subject of refraction, but to bring these few practical points to your attention.

Often the reason a patient does not get relief from pain in the eyes and head after glasses are prescribed is not that the wrong mydriatic was used, not that no mydriatic was used, not that the testing and prescribing was not done scientifically, but that the cause of the pain was of nasal origin and not from eye strain. I have found this to have been the case so often that as a routine practice I examine the nose of all patients who apply to me for glasses.

In refracting young children I use atropin sulphate in ointment form. When I use a mydriatic in older patients I use atropin or homatropin. Before using a mydriatic I make a test, and if I feel satisfied that there is no spasm present, I do

*Read before the Sixty-Fifth Annual Session, Iowa State Medical Society, Davenport, May 10, 11, 12, 1916, Section Ophthalmology, Oto-Laryngology.

not use one. One can get the refraction of an eye very closely with the ophthalmoscope if in every case the ophthalmoscopic reading is noted and later compared with the result of the final test.

By the careful use of the ophthalmoscope and the use of the fogging method, the results will be found to be the same as is obtained following the use of atropin or homatropin. Under the mydriatic the astigmatic axis is often seen to have moved five degrees or so from the position it occupied in the first test. I believe this shifting of the direction of the axis is due to the unequal tonicity of the ciliary muscle that is paralyzed. This at least I have observed, that in prescribing the cylinder it is safer to place the axis in the direction indicated in the test made without the mydriatic.

When the first strong cylinders are prescribed with the principal axes other than 90° and 180° there is often a distortion of objects. The patient should be forewarned of this possibility. Some times it is necessary to only partially correct the astigmatism and bring it up to the full correction gradually.

This is a serious matter with some. One patient, a cabinet maker, was very much peeved and complained that he had wasted a good deal of lumber on account of his faulty vision.

In the matter of prescribing prisms for the relief of a muscular insufficiency, I have not found it advisable, except in rare instances, to prescribe a prism for a homonomous diplopia which is corrected with a prism of 2° or less. In prescribing reading glasses for a presbyopic I do not add a prism unless there is a homonomous diplopia which requires at least a 3° prism to correct. If, however, there is a crossed diplopia of even 1° , I correct it fully for distance and near work. The muscular insufficiency that is most often overlooked and the correction of which invariably brings relief is that of the superior rectus, and it should be corrected down to a prism of $\frac{1}{2}^\circ$. When it is indicated, a prism of $\frac{1}{2}^\circ$ up will give more relief than that obtained by a 1° or 2° base in for an insufficiency of an internal rectus, or a 3° or 4° out for an external insufficiency. I have spoken of correcting muscular insufficiency with weak prisms only. When there is a large amount

of insufficiency, a tucking operation is much to be preferred to the prescribing of strong prisms. The necessity of prescribing weak prisms is not rare. In my last one thousand consecutive refraction cases previous to April 21st of this year, I prescribed prisms base out, twenty-one; base in, sixty-one; and base up, sixty-five times. In using presbyopic lenses for close work, the patient looks through the lower part of the lens. If one is a much stronger convex lens than the other, the effect on the wearer is that of a prism base up on the side of the stronger lens, and a prism base up ground into the weaker lens will add much to the wearer's comfort. In ordering frames I have found it very important that the lenses are properly centered. For example, if a presbyope of three diopters with a pupillary distance of two and one quarter inches is given a frame with the centers of the lenses two and one-half inches, the internal recti are obliged to overcome approximately the equal of a one degree prism base out with each eye and the eyes are fatigued in a very short time. The large round lens fad of the present is a nuisance in prescribing glasses to patients with a small pupillary distance.

The line of vision through a strong lens must be approximately at right angles to the surface to secure good vision. Lenses for close work only may be tilted with the lower edge nearer to the face and secure the proper result. The toric form, if the lenses are strong, more nearly meets this requirement if the glasses are for constant use, whether for hyperopia or bifocals for presbyopia. For the weak lens I do not think the toric form has much advantage over the flat.

It has been said by some that one is not worthy the name of ophthalmologist unless he uses a cycloplegic in every case he refracts. This sounds to me like a very extreme statement, and if literally true, I doubt very much if there is a man who has anything of a practice in this country who can honestly lay claim to this title. I do not use a cycloplegic in as large a per cent. as some do and yet I rarely have a patient return on account of an incorrect strength of the spherical or cylinder that I have prescribed. The dissatisfaction has more often arisen from the fact that I have overlooked some of the points I have mentioned as practical points on refraction.

OBSERVATIONS ON THE CAUSE AND TREATMENT OF ACCOMMODATIVE WEAKNESS WITH ILLUSTRATIVE CASES*

F. E. FRANCHERE, B.Sc., M.D., F.A.C.S.,
Sioux City

The occurrence of accommodative weakness is sufficiently common to warrant a brief consideration of its causes and treatment. Again the meagerness of literature on this subject and the frequency with which I have found cases of accommodative weakness overlooked by competent refractionists, leads me to believe that the subject has not been given the attention which it deserves, and that as a consequence, the results sought in the correction of refractive error are not attained at times because this important condition has been entirely neglected.

The symptoms in these cases do not differ materially from those found in ordinary cases of refractive error, but the simple correction of such error fails to relieve the patient's troubles and he either returns complaining that his glasses are not right or else wanders from one oculist to another until some one discovers the real difficulty. I shall not burden this paper with a study of the normal range of accommodation as such tables have been worked out by others.

By accommodative weakness I mean that under suitable and repeated tests, the patient's accommodation is below the normal range for his age, so that his condition simulates presbyopia, or early advancing sclerosis of the lens, but being in reality an insufficiency of the ciliary muscle. Possibly we cannot in some cases make a clear distinction between this ciliary insufficiency and a true paresis of accommodation, but it is not the purpose of this paper to deal with paralysis, but only with weakness of accommodation.

The cases I have seen have been about equally divided between males and females, the youngest at about eighteen years of age and up to thirty-seven years. A diagnostic point in this condition, is the irregularity of the symptoms. The patient may be able to read without correcting lenses some days, and on others this is impossible, a state of affairs which does not obtain in premature sclerosis of the lens. It must not be forgotten, however, that sclerosis and weak accommodation may coexist, although this is uncommon. I have found insufficiency of convergence associated in these cases, also what might be styled a neurasthenic retina, wherein the patient's retina

seemingly tires so quickly as to make the refracting of the eyes extremely difficult.

Among the causes noted have been toxemia, nasal obstructions, neurasthenia, eye strain and arterio-sclerosis. In my own practice, I have found disorders of the nasal cavity and the accessory sinuses and diseased teeth the preponderating causes to such an extent as to over-shadow all others. In fact, I have found visual disorders so frequently associated with those of the nose and mouth as to lead me to determine several years ago to make a routine examination of the nose and teeth in every refractive case that comes to my office.

The treatment of accommodative weakness resolves itself into the removal of the cause, and to that end the assistance of the internist must be frequently called for, as well as that of the dentist. It is particularly desirable to locate and remove foci of infection wherever they may be situated, to which end the services of the surgeon and the genito-urinary specialist are not infrequently required. The citation of a few characteristic cases, from a reasonable number seen, may serve to illustrate the points I would bring out.

Case 1—A. J., male, age twenty-nine years. Applies for relief of pain over the eyes when he reads. States that he cannot read for more than ten minutes without blurring of vision and pain.

Examination shows vision as follows:

R 6/5 no glass accepted. Cannot read Snellen 0.5 nearer than 20".

L 6/6 no glass accepted.

Under atropin.

R 6/6 + 0.25 S = 6/5.

L 6/6 no glass accepted.

Both middle turbinates greatly enlarged and in contact with the septum. Patient otherwise in perfect health. The anterior $\frac{1}{3}$ of each middle turbinate snared off under cocain anesthesia. Since recovering from the operative procedure, patient's near vision is Snellen 0.5 — 8", is able to read books or newspapers as long as he desires without blurring of vision or pain of any degree.

Case 2—M. T., female, age thirty-two, complains of blurring of vision on doing close work and states eyes tire and that she has headaches over the eyes.

Examination shows vision as follows:

R. 6/5 + 1.0 S = 6/5. Near vision Snellen 0.5 at 14".

L. 6.5 + 1.0 S = 6/5.

Under atropin.

R. 1.25 = 6/5.

L. 1.25 S = 6/5.

Given + 1.0 S, R and L. These lenses did not remedy the patient's symptoms and as she began about a year later to develop accommodative weakness, I gave her + 1.25 S on each eye. At this time she could see 6/6 without lenses only with great difficulty, and near vision had reduced to Snellen 1.0

*Read before the Sixty-Fifth Annual Session, Iowa State Medical Society, Davenport, May 10, 11, 12, 1916, Section Ophthalmology, Oto-Laryngology.

at 20". Examination of the nose showed the right middle turbinate in contact with the septum. This was cocainized, using a 10 per cent. solution of cocain in adrenalin, in order to contract the tissues and allow a further view of the nasal cavity. While waiting the action of the cocain, the patient discovered that she could read ordinary newspaper print, without lenses, but as soon as the effects of the drugs had worn away the loss of accommodation was as apparent as ever.

These two cases illustrate the action of nasal irritation in causing ciliary weakness. Whether this is caused by over stimulation of the fifth nerve fibres connecting with the third or not, I do not feel sure, but I believe that such is the case.

Case.3—N. M. Female, age twenty-four years. General health good. States that eyes feel strained and that she has headaches and nausea whenever she reads.

Examination shows vision as follows:

R. $6/4 (n) + 0.25 S = + 0.50 \times 85' = 6/4$.

L. $6/4 + 0.25 S = + 0.25 \times 115' = 6/4$.

Near vision Snellen 0.5 at 14" but eyes tire rapidly. Under atropine.

R. $+ 0.37 S = + 0.50 \times 85' = 6/4$.

L. $+ 0.37 S = + 0.50 \times 100' = 6/4$.

She was given these for constant wear but returned a few months later and stated that she was still unable to do close work longer than a few minutes at a time. Examination showed near vision Snellen 0.5 at 18" with difficulty, while wearing her correcting lenses. Muscle balance normal. Nasal cavities normal, teeth normal. Tonsils small but embedded, and patient says she has occasional attacks of sore throat and "rheumatism." Tonsillectomy afforded her relief from her rheumatism, and her accommodation has resumed its normal state although she still wears the same correction of her refractive error. This case was one of undoubted toxæmia from chronic parenchymatous tonsillitis. I have always regretted not having had a bacteriological examination of the tonsils made at the time.

Case 4—Female, age thirty years. Complains that eyes tire and ache after she does any close work. Patient spare and appears anæmic and nervous. Says she has been working very hard.

Examination shows vision as follows:

R. $= 6/9 + 0.75 S = 6/5$.

Near vision Snellen 1.0 at 20".

L. $= 6/12 + 1.0 S = 6/6$.

Under atropin.

R. $6/12 + 1.0 S = 6/5$.

L. $6/15 + 1.25 = 6/6$.

Given R. $+ 1.0 S$ and L. $+ 1.25$.

Nose and teeth normal. Referred to an internist, who found her badly run down and neurasthenic. She was put on a course of tonics with hydrotherapy and massage, and in the course of a year regained her lost accommodation.

The writer does not feel at liberty to use valuable time in rehearsing other cases of like char-

acter, but feels justified in assuming that, as a logical deduction from the cases observed, accommodative weakness from causes before enumerated, is common, and the oculist has not done his whole duty by the patient whose refraction he measures, unless he at the same time searches out and removes or at least recognizes as such, all causes of ciliary insufficiency whenever it is found to exist.

(Papers Discussed Jointly)

Dr. F. G. Murphy, Mason City—Dr. Dean's use of prisms commends itself to my judgment, though I think I do not use them to the extent that he does. I use prisms base out, only by widening the pupillary distance of the spectacle frame in cross strabismus, and depend upon relaxing the interni by prescribing as strong plus lenses as the ciliary muscles will relax under, increasing the strength of lenses from time to time. Not having used a mydriatic in my refraction for more than twenty years, it is encouraging to see so many of my confreres abandoning the cycloplegics. The extra ocular muscle balance determines whether a little more or a little less of the manifest hyperopia shall be corrected. I am not prescribing lenses for as large a percentage of patients as I formerly did, as I find that focal infections and intestinal stasis cause patients to suffer from refractive errors that give them little or no trouble when these sources of infection have been eliminated. In my judgment the patient who thinks he needs glasses is as much in need of a thorough examination as is the one who complains of pain in the abdomen.

Dr. E. P. Weih, Clinton—Relative to a statement made by Dr. F. W. Dean regarding the use of a large hole in the ophthalmoscope, I wish to tell an experience I had in Fuch's out-patient clinic.

After refracting a young adult who had hyperopic astigmatism, I gave my results to Professor Meller, to be checked over. He immediately asked me why the patient did not have normal vision, and, after looking at the fundii and measuring the refraction with his ophthalmoscope, told me that I did not have all his astigmatism corrected. This he was kind enough to prove to me with the correcting lenses. He then told me that in patients with undilated pupils, one could see the fundus much clearer and measure the refraction better if he used a flat mirror with a hole that was smaller than the patient's pupil. He advised the use of a hole not larger than one m. m., those smaller being better.

Dr. J. G. Roberts, Oskaloosa—I want to say that there is no class of cases which I dread more than those presbyopics with a weak convergence. Dr. Murphy says that if you will cut their plus correction down a half a diopter you may possibly relieve them. Now you possibly will not and I almost would say you positively will not. In younger patients one may give prism exercises and finger exercises and build up the convergence, but in these patients where the muscles in company with other

tissues are beginning to degenerate, that is out of the question, and for my part I try to get rid of these patients as quickly as possible, referring them to some of my more able colleagues. As for the use of a mydriatic I think the one who uses a mydriatic in every case is just as far wrong as the one who never uses one. There are cases in which it is not needed, and it is an imposition to discommode a patient for several days by its use, and there are cases where it is necessary and one is not doing justice to withhold it. However, I find there are very many more cases where one can do satisfactory work without its use than I formerly thought, and also when I use a mydriatic I use atropin. Homatropin I consider worse than useless. Its action is not complete and I believe that it frequently gives rise to a false astigmatism. Finally I do not believe in using a mydriatic or better cycloplegic simply as a badge of regularity. If that is all we have to distinguish us from the irregulars, we haven't much.

Dr. J. E. Reeder, Sioux City—I have enjoyed Dr. Franchere's paper very much.

I wish to cite a case which occurred sometime since while I was acting as house-surgeon in the Illinois Charitable Eye and Ear Infirmary, which is a question whether or not it was an accommodative anomaly or glaucoma. The nature of the case was this: Patient was admitted to the house suffering from acute glaucoma in right eye, tension right eye, 45; tension left eye, 18 upon admittance; vision left eye 20/40; retinoscopy showed plus 1.00 S. but when placed before the eye vision still remained 20/40. Eserin was ordered for the glaucomatous eye. By mistake eserin was applied to both eyes. Following day tension showed left eye to be 10, instead of 18. Vision was 20/30 with plus 1.00 S went up to 20/20.

The questions which arose were these:

1. Was a tension of 18 normal for the left eye?
2. Was it an accommodative anomaly?
3. Will eserin lower the tension of a normal eye?

I note some of our authorities are still divided upon this question, whether eserin will or will not lower the tension of a normal eye.

I merely cite this case to bring out the point that one should use his tonometer more frequently than we are prone to do, as I think it is just as difficult to tell whether there is an increase tension of an eye by tactile sense to compare with the tonometer as there is in telling how many pounds pressure you have in an auto-tire by picking it and using a tire-gauge.

Dr. F. E. Franchere, Sioux City, in closing—Someone has brought up the question as to the fitting of lenses without the use of atropin.

I regard this as absolutely an impossible thing to do, if one is going to be accurate. You can no more measure the refractive error of an accommodating eye, than you can measure the distance between the focal center of the lense in a camera and the sensitive plate, while someone is alternately bringing the plate closer to and farther away from the lens. The

conditions are parallel. Not only that, but the instillation of atropin once or twice is frequently of no value whatsoever. I have repeatedly found it necessary to atropinize the eye for several successive days before the accommodation could be put at rest. In one case, it took some weeks. This patient came to me wearing minus spheres, and would accept nothing else. In fact they improved her vision. Homatropin and retinoscopy showed me that she was not myopic. Still she would accept nothing but minus spheres. After several weeks of daily use of atropin, she accepted plus cylinders, which she has since worn with perfect comfort. This was an extreme case but it illustrates my point. Homatropin, I regard not only as useless but misleading, and use it only as a mydriatic in old people.

EYE STRAIN

EZRA C. LAWRENCE, Ph.G., M.D., Des Moines

That eye strain is the direct cause, in many instances, of migraine and its tortures of head and stomach, and in a way connected with many ills of the body, is quite well understood, as well as often causing many eye diseases, such as conjunctivitis, retinitis, blepharitis, possibly iritis, and, when accompanied by faulty nutrition, lack of fresh air, proper diet and exercise, others such as phlyctenular keratitis, so prevalent among young children, often accompanied with red eyes, dull cornea, adenoids, swollen tonsils and often bad teeth, and as the perfect eye probably does not exist on account of the shapes differing in different eyes, nature not adhering to mathematical measurements, must have one or more of the various defects, as hyperopic, or short eye, myopic, or long eye, astigmatism or malcurvature of the cornea, the refraction of the several meridians of the eye ball being different, strabismus, hyperphoria, heterophoria, etc., caused by imbalance or lack of co-ordination of the external ocular muscles; and presbyopia beginning at about forty years of age and increasing to about sixty. This added strain doubles up all the previous strains, and as our civilization progresses, so does the demands on the eyes for near work. The hyperopic eyes of childhood, under pressure of civilization are turned to myopic and astigmatic by the strain put upon them. In Germany it is recorded that from 50 to 60 per cent. of the students are myopic, while in this country more attention is given the eyes, the myopic students will not figure more than 8 or 9 per cent., besides the eye discomforts, nerve and stomach troubles, and those without proper eye treatment, as stated by Dr. Earl Flynn of California,—whom I have had the pleasure of meeting and hearing lecture on many occasions,—that resorting to smoking,

drinking tea and coffee, and to alcoholic stimulants, to stimulate or soothe the tired nerves; also it is said that one tenth of the liquors consumed annually in this country is on account of eye strain. Why was opium eating resorted to by DeQuincy, one of the most classic men of Europe? Why was Carlyle a pessimist? What of Wagner, the flower of musicians, with his nervousness, physical suffering and banishment from Germany, with wrinkled forehead, left eye turning up and out,—eye strain. While different constitutions will endure different degrees of eye strain, or any other hardships, often the seemingly more trivial amount of refractive error causing the greatest torture, while others with great errors of refraction appear to be much less affected. To illustrate:

Case 1—Miss H. a school girl fourteen years of age; came to me for an examination of the eyes as she "thought that they might not be right" but her mother was sure she did not need glasses as "she had been fitted a year ago by Dr. _____" naming a self styled "expert" who was a spectacle vendor, not a physician. She was wearing R. E. + 3.00 sphere. L. E. + 3.00 sphere.

I examined her eyes with a cycloplegic and found the true correction needed was R. E. + 2.50 S. + 3.50 cyl. ax 100. L. E. + 2.75 S. + 3.12 cyl. ax 105, giving a vision of 20/20, her vision without, or with her old glasses, being below normal, about 20/25. I gave her the above correction which was satisfactory, giving no trouble, until two years later, when she reported that for some little time—about a month "her eyes seemed to trouble a little, not really hurt, but kind of funny." I found her glasses were twisted enough, considering the correction, to trip one up. I straightened the frame, and putting them on, and remarking "that's fine," off she went, and still no trouble.

Case 2—A physician brought his wife, age twenty-six, to me to see if her eyes were the cause of her trouble. She had 20/20 vision, she had treated for nerves, stomach, headaches, etc. She complained of car sickness, head ached when shopping or attending shows or card parties, reading or any close work. She had tried glasses but did not think she received much benefit, if any. Her glasses were R. E. + 1.00 sphere. L. E. + 1.00 sphere. I examined her eyes and found that the following correction was needed, which I ordered. R. E. + .37 cyl. ax. 90. L. E. + .25 cyl. ax 80, giving V 20/20 + 1. 20/20 + 2. All eye strain symptoms vanished. She has had no further discomfort in any way.

Case 3—A young druggist from a neighboring town called, thinking he needed glasses, but when I examined his eyes, I found in my judgment the glasses were not needed. I suggested the difficulty, which he proceeded to correct, consisting in stomach and nerve trouble, and told him to report a month or two later; this has been several years, with no eye difficulty and no glasses.

Case 4—A young man came in to me presenting a case of eye strain, had been to a self styled "specialist" without much relief. He was wearing R. E. + .75 sphere, L. E. + .75 sphere. A careful examination showed the refractive error to be R. E. + .37 S., L. E. + .25 S + .25 cyl. ax. 85. With this correction the inflammatory symptoms subsided, and at this time is still in a comfortable condition. He had paid \$10.00 to a spectacle vendor, a self praised "expert" who would charge \$10.00 to \$15.00 for misfit glasses, that, were they correct, and not an injury, would probably not be worth over half the money.

The four types of cases are sufficient to show that a careful refraction will, in many cases, relieve much of the long list of evils, traced to the eye. Case No. 1 with a great error of refraction, did not suffer much. Case No. 2, with very little error of refraction suffered continual torture. Case No. 3 showed hardly any refractive error, and was made comfortable by his dentist's work on his teeth and his attention to his stomach and digestion, the eye not causing these troubles.

While the eye is one of the most important and most delicate in structure and mechanism of any organ in the body, it, at the same time seems to be the most fool proof organ we own. While people consult physicians for the various human ailments, would not take a watch to a blacksmith for repairs, the eye, the most faithful servant, working double time, he is often willing to take the chance.

Exercising the eye muscles for eye perfection or efficiency is as important as exercising all muscles of the body for the same purpose. A boy often rushes to school after a hearty meal, takes part in vigorous exercise until called in to the class room, he then draws all the blood he can from the stomach to the brain, to get his lessons, which interferes with digestion, he receives little nourishment from the food, but turns it to poison which often excites nerves not requiring stimulants, becomes irritable, perhaps acquires bad habits, and for want of nourishment eats more food,—in a hurry perhaps,—deranging digestion and assimilation, his eyes tire easily, vision is deranged, perhaps he gets glasses, does not get much better; perhaps if he had been given the proper diet, not too much, and with proper chewing of food, and understood that if he had to hurry he should eat but little or go without altogether, he would arrange to have time for his meals and digestion. Proper outdoor exercises, fresh air, proper breathing, exercising eye muscles as well as others, flushing the face by forcing the blood into the capillaries by puffing out the cheeks, he will learn his lessons easier and in many cases the eye difficulties will not appear,

and no need of glasses; the same is applicable to people of all ages, making them more healthy, robust and better looking, retarding the facial wrinkles and make them happier. The student should also understand that eye strain causes many diseases. The light at all times should have consideration, good lights above, back and from the left, no flickering gas jets. Many eyes are injured by too bright sun light, electric lights, and where the eyes are not acclimated, as ocean resorts where the glare is reflected up from the water and on the other side perhaps a white building. Quite recently I led a man two blocks at Ocean Park,—his eyes blinded by the glare,—to the shade of a store where he stayed an hour to recover his eye strength sufficiently to take a car for Los Angeles. In such places one should wear light smoked glasses, prevent squinting, thus avoiding the damage and getting some comfort. Negroes and others with dark pigmented eye ground, will not be affected. As the conscientious oculist or other physicians' work is much in the line of applied Christianity, he will best advise whether or not glasses are needed; if so, properly fit them, and if glasses are not needed, just as freely advise. While many people, it is known, wear glasses, many more should, also that many do, who should not. Early and frequent inspection will prevent many ills and eye glasses, and, in this, not overlooking the fact that in many instances a good dentist can do more good than all of us.

CERTAIN TYPES OF APPENDICITIS*

DELL W. WARD, A.B., M.D., Oelwein

In consideration of the vast amount of literature that has accumulated and the endless amount of discussion that has been indulged in on the subject since Reginald Fitz of Boston marked the beginning of a new epoch in abdominal surgery, when he definitely established the old inflammation of the bowels and para—and paratyphlitis to be appendicitis in 1886, one feels almost obliged to preface any further remarks upon the subject with an apology.

But since "Sir William" Arbuthnot Lane, of short circuit fame, has unfortunately not entirely succeeded in short circuiting this stick of dynamite, we term the appendix, out of our pathology, and since disease of the vermiform appendix is now and always will be one of the most common and dangerous surgical conditions we have to meet, I feel that there are still some phases of the subject that may be discussed with profit.

Thanks to the invaluable work of Metchnikoff, Lane, Jackson, and others, and the recent revelations of the X-ray, our knowledge of abdominal surgical pathology has been greatly enriched in the last few years, and we have been compelled to reconstruct to a certain extent our conception of the functions and even the normal anatomy of some very common intra-abdominal organs.

We have been shown that many cases commonly recognized as chronic appendicitis are not appendicitis at all. The interesting researches of Dr. Rosenow have definitely proved that many abdominal infections, notably appendicitis, gain access through the tonsils. Waller and Cole have recently concluded a series of very interesting experiments that strongly suggest that the appendix has a very important physiological function, contrary to the long established conception of its uselessness.

In the light of these facts and with all due respect to such pioneers as Murphy, Ochsner, Deaver, Fowler, Morris and others whose epoch making work in establishing correct principles of diagnosis and treatment of appendicitis has been a great achievement of American surgery, who can say that the last word has yet been spoken in regard to this most trying surgical condition and who can predict what the future will reveal?

It is the conviction of the writer that improvement in diagnosis and treatment of appendicitis by the rank and file of the medical profession has not kept pace with the active research and advances in knowledge of recent years. In support of this, I need only mention that in spite of all the preaching of early operation, too many cases are yet allowed to go on to perforation, extensive abscess development or gangrene, that should have been operated upon many days before; on the other hand too many appendices are blamed needlessly and removed when the pathology should have been located elsewhere. Such evidences of bad diagnosis and treatment are of almost daily observation by every surgeon.

For further evidence I need only submit the recent statement of no less an authority than Dr. John B. Murphy, that the total mortality from all types of appendicitis from all over the country, is today as high as ten per cent.

The American Text Book of Surgery of issue of 1892, quotes the mortality at one out of seven or eight cases, only slightly higher than Murphy's figures for 1915. Here also, only ulcerative and perforative cases are classed as surgical affections, and surgical intervention is advised only if the case does not yield to medical treatment.

*Read before Sixty-Fifth Annual Session, Iowa State Medical Society, Davenport, May 10, 11, 12, 1916.

Today all cases are known to be surgical affections and early operation is advised by all surgeons, yet we must face the fact that regardless of all the new light gained from the last twenty-five years' experience and teaching, the total mortality is only slightly less than when only late cases were regarded as surgical.

These facts lead to the inevitable conclusion that there is gross error somewhere in the management of cases of appendicitis and that there is urgent demand for better diagnosis and treatment.

While many factors are responsible for these errors, and consequent excessive mortality, it is the purpose of this paper to discuss certain types of appendicitis in which it is believed errors in diagnosis and treatment most often occur, and emphasize a few points that have not been given the important consideration they merit and that are believed to be responsible for some unnecessary mortality.

The following cases are reported as a basis for discussion of types they represent and points to be emphasized.

Case 1—M. C., female, age eighteen. Patient first seen late in the afternoon, presented the usual symptoms of an acute attack of appendicitis. Severe abdominal pain, nausea and vomiting, elevation of temperature, rapid pulse, right rectus rigidity and tenderness made the diagnosis plainly evident. Operation was decided upon for the following day on account of having to wait for the arrival of a nurse. On my arrival the next morning, the patient's mother requested me to defer operation as her neighbor had told her that her daughter had had only an acute indigestion and was practically well, and that I would kill her if I operated. On examination I found that the pain had entirely disappeared, the temperature had fallen to normal, the pulse rate was eighty-five. There was, however, some rigidity of the right rectus muscle, very slight tenderness over McBurney's point and tongue was badly coated. I with difficulty, secured consent to operate, and found a gangrenous appendix which was removed and the wound closed with drainage. Wound drained for short time and patient had an uneventful recovery.

This case illustrates a type, (and a very large one) in which gangrene had developed during an ordinary acute attack of appendicitis. John B. Deaver stated in 1900, that "With a low pulse-rate, normal temperature, diminution or cessation of pain, lessened tenderness and rigidity, ulceration of the appendix, progressing to perforation and gangrene, may be making rapid headway." The importance of this statement is well illustrated by this case and can not be overestimated. This case developed into one of the most dangerous surgical conditions without

warning with an amelioration of all symptoms. We are commonly advised that with the development of gangrene the temperature may fall and pain suddenly disappear but that the pulse rate remains high and tenderness persists or is greatly increased, and many cases are heralded with a chill. This is by no means always true, and it is of extreme importance to remember that when gangrene develops, all symptoms may ameliorate or disappear exactly the same as if the case were progressing favorably. If the appendix is retrocecal in location, there may be practically no abdominal tenderness and very slight rigidity, yet the appendix may be completely gangrenous. Cases of this type are too often treated by the family physician as "acute gastritis," "acute indigestion" or perchance, he may diagnose the case as appendicitis, but say it is only a "mild attack and will get well," possibly because it may be the first attack. He may advise that most potent poison in this class of cases—a laxative. It might be well to say here that careful examination should always be made of any patient suffering from abdominal pain, no matter how slight, before administering a laxative. No other class of cases speaks so forcibly for extreme care in diagnosis, and early operation, than these, on account of the absolute unreliability of all the usual guiding points as to the amount of pathology in the region of the appendix.

Case 2—F. D., male, age twenty-two. Patient awoke in the morning with a slight discomfort in his abdomen, but went to work as usual. At about ten o'clock A. M. he quit work and went home on account of pain in abdomen. A physician was called, left some medicine (possibly a laxative), and told him he had a "slight attack of appendicitis," but that he would get along alright, as it was his first and only a mild attack. I was called to see him at noon, and at that time the patient had pain and tenderness over the right abdomen, temperature 102, pulse 110, and he had been vomiting.

Immediate operation performed and disclosed a completely gangrenous appendix. This must have developed insidiously, without any symptoms of importance, until there was a dangerous degree of pathology. There was absolutely no pain until the forenoon of the day of operation.

This case represents a type in which gangrene has undoubtedly been present from the outset and must be considered as a primary pathological entity, dependent upon the anatomy, histology and location of the appendix, with all other etiological factors secondary. In such cases the appendix dies without producing any noticeable symptom until it begins to set up localized peritonitis. The appendix dies first and becomes infected afterwards, just as happens to any other organ in

which primary gangrene develops. Such cases may show total gangrene in six hours from the first evidence of any symptoms. Cases of this type also illustrate the absolute impossibility of foretelling the degree of pathology in any acute attack of appendicitis to any degree of accuracy.

Case 3—W. D., male, age forty. Patient seen in consultation after a very sudden excruciating attack of pain in abdomen, when sitting in a chair at his home about five o'clock P. M. Examination showed all the usual signs of perforative appendicitis and beginning peritonitis. Immediate operation was performed and showed this to be the case. This patient had worked the day before his operation, and the case is quoted to impress the point that a dangerous degree of pathology may be present without alarming symptoms until serious trouble has been precipitated. It had been considered up to the time of perforation as a "mild attack of appendicitis." Patient recovered after removal of the appendix and instituting drainage.

Case 4—H. McD., male, age twenty-one. Patient seen in consultation about ten A. M. He showed the usual symptoms of appendicitis. None of his symptoms were especially severe, but his tongue was heavily coated and he looked very sick. Operation that afternoon revealed a greatly swollen appendix with perforation. There was only a slight amount of pus in the region of the appendix but an enormous amount of pus in the pelvis. This patient was operated upon within thirty-six hours from the time he was first seen by a physician, and he had worked the second day previous to his operation, yet it was a very late case. He also must have had perforation without pain as it must have taken many days for the development of the large amount of pus found, and he had his perforation before this could start to develop.

Case 5—Mrs. R., married, age twenty-three. Patient first seen Wednesday, about 11:30 A. M. She had complained of some pain in the abdomen since Friday, which she described as a "stomach ache." I was called to see her on account of pain in the pelvis. Diagnosis of appendicitis was made on account of tenderness in region of appendix, right rectus rigidity and the absence of any history of previous pelvic trouble or irregularity of any kind. However, her pain was entirely in the right side of the pelvis. Operation disclosed a gangrenous appendix with perforation and an enormous pelvic abscess. Tubes and ovaries were normal. The appendix removed, abscess drained. Recovery.

This case also illustrates the type in which there is gangrene and perforation without the usually expected alarming symptoms. This patient did not feel sick enough to go to bed until she had pain from pressure of the abscess alone.

Case 6—Mrs. McC., married, age thirty. Patient gave history of two induced abortions within three months. Present trouble started Friday night with pain, and vomiting, rapid pulse and elevation of

temperature. On Sunday afternoon, when I first saw her, the nausea and vomiting had ceased but there was severe pain and tenderness low down in the right abdomen. Later in the evening, there developed bladder irritation and vaginal examination showed severe tenderness in the right side of the pelvis. On account of the history of the abortions, tubal infection was suspected. The following day, there still being severe pain and on account of the possibility of the trouble being appendicitis, considering the history of onset, operation was performed. There was found a gangrenous appendix with its tip at the brim of the pelvis, and the tube and ovaries were practically normal.

This illustrates that the location of the pain and greatest tenderness is not always a reliable guide to the correct pathology in appendicitis, and too much stress on previous history may lead to error. It also shows the value of history of onset of the disease if it can be obtained, as the beginning symptoms were typical of appendicitis in this case. Careful diagnosis is important in this type of cases, as indications for treatment may be diametrically opposite in the two different affections.

In the diagnosis of all the above types of cases, the history of onset of the attack is important, and it should always be remembered that the appearance of pain, nausea and vomiting, local sensitiveness, elevation of temperature and leucocytosis in the order named, as impressed upon us by Murphy, is characteristic of appendicitis, but it also should be remembered that such cases are late cases when first seen, and an accurate history cannot always be obtained. Then rigidity of the right abdominal muscles, deep tenderness elicited by palpation and fist percussion and elicitation of the rebound pain, are valuable signs.

Points deserving special emphasis that these cases have been quoted to illustrate, are: That in many of the most dangerous types of appendicitis, the degree of pathology is out of all proportion to the severity of the symptoms; that gangrene may be present at the outset, without pain or any other alarming symptoms; that gangrene may develop during the course of any ordinary attack with an amelioration or practical disappearance of all symptoms; that perforation may take place without pain, and extensive abscess develop with only slight symptoms, until there is pain from pressure alone. During the course of any acute attack of appendicitis, the sudden amelioration of symptoms should always be looked upon as a danger signal, and usually indicates gangrene, perforation with relief of tension, or general paralysis of sensory nerves, due to severe sepsis. On the first visit to any appendicitis patient there may already be present

any of the above mentioned late complications, no matter how mild the symptoms. The condition of the tongue and general appearance of the patient are more reliable indices as to the severity of the case than the amount of pain, temperature or increased pulse rate, but any and all guides to a correct diagnosis and prognosis may lose their reliability in many of the most dangerous cases of appendicitis. There is absolutely no infallible guide as to the absolute degree of pathology in any case, or safe rule by which to estimate whether the case is an early or a late one. Many of the worst attacks are first attacks.

While all these points are often emphasized in a general way, I believe that they have not received sufficient recognition when dealing with this class of cases, and a more thorough emphasis will lead to better diagnosis and more timely treatment, with a corresponding lessened mortality.

Some important points in regard to treatment have been mentioned and need no further discussion. One of the most common and gravest errors I believe to be the institution of the so-called "Ochsner" method of treatment in many of the above types of cases, that should have been given the benefit of a much needed earlier operation. In short, many of them are "Ochsnerized" until some fatal late complication "Ochsnerizes" the patient. Many cases are being treated in this manner that Dr. Ochsner himself would give the benefit of a much needed immediate operation. This is due to a lack of appreciation and a misconception of the indications for such treatment and a difference of opinion as to when it is indicated. I have seen cases treated in this manner as a substitute for operation, and the physician wonder why his patient did not get well. An investigation of methods of treatment of various surgeons showed that many different rules are being followed as to when to operate or institute such temporary treatment as a localizing measure. For example, some adopt an arbitrary time limit, others do not operate if the case is progressing, others use this same criterion as an indication for operation, but do not operate if the case is stationary or undergoing resolution. The very lack of uniformity of these rules that are being followed, indicate the uncertainty of their value, and this together with the absolute impossibility of accurately and surely estimating what is going on within the abdomen in any given case, should lead to the uniform and safer measure of operating upon every case of appendicitis as soon as the diagnosis is made, regardless of time or any attempt at estimating the stage of the disease. The only possible exceptions to

this rule should be in cases of rapidly spreading peritonitis when the patient's condition is extremely critical and resistance low, and these cases should be classed as peritonitis rather than appendicitis. I am convinced that recognizing a waiting period and temporizing with a poorly applied pre-operative treatment is responsible for more deaths in the hands of many physicians than immediate operation in every case as soon as the diagnosis is made.

In regard to the removal of the appendix in abscess cases at the time of draining the abscess, there is still much difference of opinion. There are various rules being followed in regard to this, but personally I agree with Robert T. Morris, that in any acute attack of appendicitis, the safest procedure for the patient is to isolate his infected appendix at the earliest possible moment, and it is isolated only when it is out of the patient's abdomen. Various surgeons leave it until a secondary operation in from one-half per cent to one hundred per cent. of abscess cases. Many of our most noted clinicians still advise a two-stage operation unless the appendix is easily accessible within the abscess cavity. I hesitate to take issue with the many eminent surgeons who advocate this treatment, but simply state that the results of my own personal experience force me to conclude that removal of the appendix at the primary operation is not the dangerous procedure we are taught to believe, but on the contrary, is the safest procedure for the patient in this class of cases. I have always felt that the practice of leaving a dirty sloughing appendix in the human body whenever possible to remove it, is an unscientific and dangerous procedure, and have always removed it in every case with a mortality as low as any I have seen quoted. The only exception to this rule should be if the patient is standing the operation badly and this should be decided by the judgment of each individual operator in each individual case. My observation of other surgeons' cases in which this treatment has been followed, shows equally good results. On the contrary, my observation of cases that have simply been drained, has shown higher mortality, prolonged drainage and subsequent operations, even if the cases ultimately recovered. The statistics of Dr. Van Buren Knott of a mortality of 1.2 per cent. in a large series of abscess cases with operation as soon as the diagnosis is made, and the removal of the appendix in every case should be sufficient argument for the correctness of this treatment.

With proper care and disposition of gauze to protect uninfected peritoneum and careful, gentle search for the infected appendix, and care-

fully opening up and wiping clean all secondary abscesses, the appendix can be safely removed in practically every abscess case, at the primary operation, with very little increased risk and far more ultimate safety to the patient than an incomplete operation leaving the appendix as a source of further suppuration and complications such as general peritonitis, pyle-phlebitis, and fatal septicæmia, and the additional risk of a difficult future operation.

Ample drainage and the Ochsner-Murphy-Fowler treatment are indispensable as a post-operative measure.

When this practice, together with the abolishing of a waiting period in practically all cases of appendicitis become a more uniform procedure, then will the greatest step be taken for a very desirable reduction of mortality, and the treatment of appendicitis be placed on the proper scientific basis, in keeping with the advance in knowledge of the most brilliant period in the history of surgery.

VACCINE THERAPY*

M. F. STULTS, M.D., Wiota,

I wish in the beginning to state that the part of my paper up to where I give my own experience with vaccines, is based upon the writings and profuse quotations of Dr. G. H. Sherman, of Detroit, Michigan, in his work entitled "Vaccine Therapy."

A large proportion of our diseases are caused by germs. It has been found that fresh normal blood serum has a bactericidal power and that this power is due to the presence, in very minute quantities of a variety of substances which have been termed inter-bodies and which combine with another substance called the complement. The complement in normal serum is destructive to bacteria. The inter-bodies or anti-bodies have an affinity for both complement and bacteria, thus bringing them together. It has been found that the white corpuscles play an important role in the immunizing process as phagocytes or "devouring cells," having the power to take up germs and destroy them by a process of digestion. It has also been found that the phagocytic power of the white corpuscles is very slow or almost entirely negative unless they are suspended in blood serum, and that when suspended in blood serum obtained from previously immunized animals, the phagocytic power is much greater than when suspended in ordinary serum.

Sir A. E. Wright, of London, found that this

phagocytic power is specific, it only taking place when the same kind of germs are used in the experiment with which the animal was immunized. Dr. Sherman says:

This is the fundamental principle underlying the whole subject. The difference between a serum and a vaccine immunization should always be kept in mind.

Again, I will quote Dr. Sherman:

When a serum is employed we inject under the skin ready prepared immune substances combined with the blood serum obtained from highly immunized animals to aid the patient in overcoming the infection. When a vaccine is employed previously prepared and sterilized, pathogenic bacteria suspended in normal salt solution are injected under the skin.

He also says:

Wright conclusively demonstrated that during the immunizing process against pathogenic bacteria, nature automatically increases the opsonic power of the blood, resulting in a materially increased phagocytosis. He also found by taking the opsonic index at short intervals that when a sufficient number of previously sterilized pathogenic bacteria are injected under the skin, during the course of an infection the immunizing power of the blood is aroused, producing more opsonins and likewise resulting in an increased phagocytosis.

These anti-bodies which the dead bacteria produce when injected under the skin are also called anti-toxins, opsonins, lysins, precipitans and agglutinins. Vaccines are not dangerous if properly used.

Prof. Timothy Leary, of Boston, says:

The general harmlessness of vaccines is indicated by two cases of infection in which through error, 10 cc. staphylococcus pyogenes aureus vaccine containing ten billion organisms were injected at one time as an initial dose. In one case no untoward symptoms appeared. In the second there was a temporary collapse with prompt response to heat and stimulation.

Again, he says:

As evidence that large doses are at least harmless, I might cite the case of a child seven years, undergoing an infection with pneumonia with a temperature of 103 degrees and extreme meningeal symptoms into whose body was injected as an initial dose one billion, six hundred million pneumococci. A standard dose for an adult is eight minims or one hundred million pneumococci. This child, receiving sixteen times the dose of an adult not only did not show harmful results, but began to mend shortly following the initial injection and recovering under a daily injection of several times the usual adult dose. A second child with pneumococcus meningitis showed prompt diminution in the cerebral spinal fluid and sharp amelioration of symptoms accom-

*Read before the Cass County Medical Society.

panying the use of four to eight times the adult dose of pneumococcus vaccine.

Dr. Henry Harrower, of Chicago, says:

To put it very plainly, vaccines are not dangerous. This statement is made with all due deference to the feeling of many whose articles or statements I have read or heard. I will qualify this statement by adding "if properly used." It must be evident that any agent to be therapeutically valuable must carry with it possibilities of harm if its use is overdone, just as too much bread or butter will make a man sick.

Dr. J. B. Deaver, Dr. J. C. DaCosta and Dr. D. B. Pfeiffer make this statement:

As a contra indication to vaccine treatment we can only mention one, namely, overwhelming sepsis. It is not rational to expect help in such a condition and from the nature of the case it is possible to do harm by adding more toxin though we have not seen an instance of this clinically.

I could mention many others who insist upon the harmlessness of vaccines, but will only mention Dr. Sherman from whom I have been quoting largely in this article. Dr. Sherman is an able practitioner of Detroit, Michigan, of many years experience, who became attracted by Wright's excellent work and used staphylococcus vaccine for the first time in a very bad case of palmar abscess in 1905. He had such remarkable results that he had some streptococcus vaccine made at the Detroit Clinical Laboratory from a culture obtained from a case of tonsillitis. He used this in the treatment of rheumatism with such good results that his reputation soon extended beyond Detroit. He supplied his vaccine to other physicians and in time began to use vaccines for other purposes and of course recommended them to his professional brethren and before he was aware of it, was in the vaccine business. Out of many thousands of doses, used by many physicians to whom he supplied them, as well as eight thousand doses used in his own practice, not one case occurred when any harm resulted that could be attributed to the vaccine. I am thus mentioning Dr. Sherman because in his work on Vaccine Therapy he quotes many prominent physicians to whose writings I do not have access.

One other point about vaccines of which much is said by critics is the "fear of the negative phase." To quote from Dr. Sherman:

The "positive phase" is a condition in which the immunizing powers are sufficient to prevent the extension of an infection and ultimately to eradicate it. The "negative phase" on the other hand, is a condition in which the immunizing powers are insufficient to cope with an existing infection.

Further, he says:

The clinical symptoms to be relied upon as a guide, are the temperature, rapidity and character of the pulse, the patient's feelings and expression, degree of swelling and inflammatory reaction in local infections and the amount of pain and suffering. The nearer these approach the normal the better the immunizing response.

Dr. Sherman and Dr. Harrower seem to think that some critics must confuse vaccines with tuberculin which as Dr. Harrower says is a toxic product and not really a vaccine at all, (which latter are given in cases where the patient is already saturated with similar toxins) the possibility of danger from its careless or unwise administration are very great. Another point of which I wish to speak before giving my own experience with vaccine is the autogenous and stock vaccines. Dr. Sherman says:

Autogenous vaccine is one in which the organism used in making the vaccine is taken from the patient to be treated. This same vaccine would be a stock vaccine for any other patient having the same kind of an infection. The delay in securing an autogenous vaccine when prompt action is desired is apparent when we consider the time necessary to make them.

I again quote from Dr. Sherman, as to the time required:

To make an autogenous vaccine the culture must be procured and incubated eighteen hours to obtain a growth. Very often it will be found that the growth shows several kinds of organisms, there being a mixed infection present. Then sub-cultures, to separate the various kinds of germs must be made and again incubated eighteen hours, then the vaccine must be made including the count of the organisms, and the sterilizing process. After this sterility tests should be made by incubation at least twenty-four hours before the vaccine should be used.

Dr. Sherman in continuing says:

Such foolish delay is not advocated even by them who urge the use of autogenous vaccines under favorable circumstances where facilities for making them are close at hand.

All advocate the use of stock vaccines in such cases to check the progress of the infection while the autogenous vaccine is being prepared. If a stock vaccine suffices to check the progress of an acute infection, why not continue using it? How are we to know when the patient is improving from the dose of stock vaccine that the autogenous vaccine will do better? Extensive clinical observation by many observers shows that in staphylococcus infections properly prepared stock vaccines are just as effective as autogenous. In typhoid infections experience shows that carefully selected old cultures make a better vaccine for treating typhoid fever than auto-

genous vaccines. It has been conclusively shown that stock vaccines are often and generally better than autogenous vaccines. The reason for this is given by Prof. John O. Polak.

Autogenous vaccines of a single strain have given me unreliable reactions. This I think can be explained by the fact that the coccus is attenuated in its strength and after it has produced its first reaction, the leukocytes become more or less accustomed to the particular variety of coccus, and are less liable to effect a defense than when a vaccine of polyvalent strain is introduced. Mixed vaccines of reliable laboratories have given better results than when a single variety was used.

This has been shown repeatedly in the blood picture when an autogenous vaccine of single strain used in large doses, even up to 500,000,000 has failed to increase the leukocyte count or diminish the polynuclear percentage, the mixed vaccines of several strains have promptly produced a marked leukocytosis. Even colon bacillus infections, such as the infection of a pelvic hematocoele by the colon bacillus have yielded more promptly to mixed vaccines of polyvalent strains, than when a single autogenous germ has been used.

Dr. J. M. Van Cott (New York State Journal of Medicine, July, 1911, p. 320) after giving tabulated results of seventy-four cases treated with a mixed streptococcus, staphylococcus and colon bacillus vaccine says:

Analysis of the table results in the following conclusions:

First: Proper use of the polyvalent vaccine described above is not only harmless, but it is also of positive value in many cases of infection.

Second: A stock vaccine containing virulent strains has the advantage over the autogenous vaccine of a saving of valuable time and being available at any moment for physicians who lack the facilities for procuring autogenous vaccines.

Third: Vaccination is useless if the patient be already swamped with toxine. The only hope in such cases is to eliminate the toxine by catharsis and the Murphy drip, or where the infecting organism is known by the use of an anti-serum in conjunction with the vaccine.

Fourth: Early vaccination offers the best prospect of success.

Dr. Sherman says, after this quotation from Dr. Van Cott:

I have extensively used autogenous as well as stock vaccines and feel confident that future experience will fully justify my opinion that in acute infections stock vaccines, when given early, will give as good if not better results than autogenous vaccines. Autogenous vaccines should be used in subacute and chronic infections when stock vaccines have failed to give desired results, and also in cases

where bacterial examination shows that an unusual organism is present.

The following from Dr. Sherman is pertinent as a reply to those who ridicule what they term "shotgun" vaccines:

If a mixed vaccine should be given having streptococci, staphylococci and pneumococci where only a pneumococcus infection should exist, the streptococcus and staphylococcus will have no effect save to raise the immunizing powers against these organisms. This is an actual advantage, as it serves to fortify the individual against a later possible infection by these ever present micro-organisms.

Pertinent to mixed vaccines is a remark of Dr. Sherman that if vaccines are given to a healthy individual, absolutely no disagreeable constitutional effect is noticed and the local reaction where the injection is made is usually no more than that resulting from a dose of sterile water.

Regarding the treatment of general infections by vaccines I wish to quote from Dr. Sherman as follows:

The feasibility of using bacterial vaccines in cases of general infection involving the blood current deserves serious consideration. When the system is literally bathed with germs, to inject bacterial vaccines in such cases would look like adding toxic material to a system already overtaxed with toxemia, and certainly does not appear plausible, but experience is a good teacher. The unquestionable good results obtained in general staphylococcus infections, pneumonia, typhoid fever and the early stages of general streptococcus infections is quite conclusive evidence that vaccines when injected under the skin, have a special immunizing influence during the course of an active infection.

A further argument as to the benefits of vaccines in germ laden blood in a case of general infection, is made by Dr. Sherman when he quotes Hektoen. He says:

A series of experiments conducted by Hektoen (Journal of Infectious Diseases vii p. 319) on animals shows that anti-bacterial substances are not found in the blood, but in the tissues. In this connection we should also consider that as a consequence of an existing infection the tissue cells in all probability are to a certain extent prepared to produce immunizing substances when met with the stimulating influence of the vaccine.

He further says:

Professor James Callison (Medical Record, June 24, 1911, p. 1137) in attempting to explain this special immunizing influence of a vaccine in general infections, suggests that by inoculations of dead organisms these bacterial products are brought in great concentration into contact with those connective tissue substances which seem to be most active in the production of anti-bodies, and that the tissue cell energy under the stimulus of these dead germs

is suspended in the production of anti-bodies, while in the progressive infection, much of the cell energy is used up in combating the living organism.

Let us permit Dr. Sherman to speak a little further—he says:

There are numerous other instances recorded in medical literature showing the beneficial results of vaccine therapy in general infections, but the results as summed up by Deaver, Da Costa and Pfeiffer (Council of American Physicians and Surgeons, Vol. vii, 1910, p. 199) explains the situation as concisely as one could wish. They say, in part: "Specific vaccine treatment in our hands has not proved of benefit in the later stages of streptococcus septicemia. Staphylococcus septicemia has been treated with most favorable results at all stages. Septic intoxications without demonstrated blood invasions in a majority of the cases displayed general and local improvement under the use of vaccines if given early; the later the treatment the less certain and less satisfactory the result."

Dr. Sherman adds:

When the non-toxic action of vaccines is once thoroughly understood as demonstrated by actual experience, the erroneous ideas of those who consider that vaccines are dangerous in acute general infections, will no longer find a place in medical literature.

Again, Dr. Sherman, in order to show that the immunizing mechanism needs the help of the dead germs that the toxic material may not overwhelm it says:

On account of the fact that the non-toxic effect of physiological doses of bacterial vaccines is not fully recognized, the use of these vaccines in acute diseases has been overlooked.

Those who are contending that the immunizing mechanism is stimulated by the toxic materials absorbed from the affected area, naturally are reluctant to give vaccine in these cases, fearing that harm might be done by imposing still more toxic material on the body, by the addition of vaccine, but theory is only valuable when corroborated by practice. Even such a conservative man as Professor G. Adami who contends that toxic materials stimulate the mechanism says:

The good results obtained in these cases can no longer be questioned and what is interesting is that the system evidently benefits from the slight temporary added rise of temperature which shows itself during the six hours or so immediately following the vaccination.

The good results obtained in my first use of vaccine was in January, 1911, when I commenced using a pneumococcus mixed vaccine in cases of pneumonia. I used it in several cases and received very good results. I kept no regular case reports and so can give no detailed statements. On December, 1915, Mrs. M., a widow, after

suffering from influenza for three days with a manifest improvement on the second and third days, from a slight exposure, was suddenly taken with all the signs of pneumonia—considerable fever, rapid breathing, pain in chest with signs of acute congestion of the lungs. I immediately gave her a mixed vaccine of colon bacillus mixed with three-fourths cc. each of influenza and Friedlander mixed vaccines under the skin. The next day there was marked improvement in every respect, but I repeated the vaccines as before with the exception that I used one cc. influenza mixed and one-half cc. Friedlander mixed. The following day the patient was convalescent.

In March, 1911, I had two cases of facial erysipelas in which I used a strepto-staphylo-mixed vaccine. The first case was that of a farmer, married, and in addition to other treatment used 80,000,000 combined vaccines the first day, 50,000,000 the second day and 120,000,000 the third day.

The second case was that of a farmer's wife—a very large woman who very soon had the entire face covered with a severe erysipelatosus inflammation. On the second, third and fourth days I used a mixed strepto-staphylo colon bacillus vaccine. These seemed to hold the disease in check, but the patient did not respond to suit me and in the evening of the fourth day I used an erysipelas serum. Also on the fifth day I used the serum and vaccine. There was marked improvement at once, after using the serum with the vaccine. On the sixth and seventh days I used the vaccine alone. After the eighth day I discontinued my visits—the patient was convalescent. This seems to be a case where the body was too saturated with toxins for the vaccines to work acceptably, demanding a serum to help out the immunizing forces of the body, a condition of which Dr. Sherman speaks.

In an epidemic of scarlet fever which occurred in my practice a number of years ago, I lost two patients—one being overwhelmed with toxins from the beginning and soon died. At that time we were not using the vaccines. I should use them now and feel confident that could vaccines or vaccines and serum have been used on the two patients whose death I have recorded, their lives would have been saved.

In otitis media I have used the vaccines in two cases with splendid results. The first of these cases I took to a specialist who said to me that the case would be long drawn out, but I concluded to use the strepto-staphylo colon bacillus vaccines and the first injection produced great improvement. I used two more vaccines on suc-

ceeding days and the patient went to work. I have used vaccine in one case of whooping cough, injecting Sherman's No. 43 containing Bordet's bacillus, micro-coccus catharrhalis, pneumococcus and streptococcus. The patient was a little girl seven years of age, rather delicate in habit. She began to whoop the latter part of October, 1915. I gave her vaccine October 28th and 30th, also on November 8th, 9th, 10th and 11th, six injections in all. The whoop disappeared and she took a trip to Des Moines with her mother on a visit. The first two injections relieved her. I think it would have been better to have used the vaccine again on November 2nd instead of waiting until the eighth as I did for the third vaccination. I think that we should use vaccines at shorter intervals than is usually recommended, and I have been doing so for several years. We generally in acute cases and often in sub-acute and chronic cases need to use them every day.

"Colds" as stated by Dr. Sherman:

Are now generally recognized as infections of the upper respiratory tract—pneumococci, streptococci, the micro-coccus catarrhalis, Friedlander bacilli, influenza bacilli and other organisms being found. Usually there is a mixed infection of two or more of these. Of these the most common and persistently pathogenic are the pneumococcus and streptococcus. The micro-coccus catarrhalis and the staphylococcus are frequently met with in sub-acute and chronic cases. The Friedlander bacillus and influenza bacillus are not so often found.

I have treated a number of these cases with vaccines and with marked benefit. I generally use a vaccine containing influenza bacillus, streptococcus, pneumococcus, micrococcus catarrhalis and staphylococcus aureus and albus. In influenza with marked fever I have had patients convalescent in twenty-four to forty-eight hours. I sometimes use Friedlander bacillus with these. In many cases there is a colon bacillus infection which is generally manifested by engorgement and increased dullness of the liver. In these cases I use the colon bacillus vaccine also.

A writer in a small publication put out by the H. K. Mulford Company says that:

Persons who are always greatly bothered with "colds" during the winter, some of whom go to warmer climates during this season, can be immunized by commencing in November and using the proper vaccines once a week for from four to six injections.

I have proved this to be true in my own person, although I had not used them systematically, which I will do another fall. I have employed the vaccines used for "colds" with good results in asthma, although because of a prejudice I have

not been able to continue the vaccines as long as they should be used and at three to four day intervals. I have had some good results with the streptococcus and staphylococcus vaccine in rheumatism. One case was that of a very aged lady said to be ninety-five years old, who also was quite intelligent and active, who was slightly injured in getting on to a train. A rheumatic trouble in right hip and leg developed. Three doses of a mixed vaccine relieved her. Dr. W. C. Wolverton (Medical Record, Oct. 28, 1911) gives a detailed report of his experience with the use of streptococcus vaccine in acute articular rheumatism. Several instances have occurred in his practice which have convinced him of the specific causative influence of the streptococcus in acute rheumatic polyarthritis. He began the routine use of streptococcic vaccine in six such cases and the response to the exhibition of streptococcus pyogenes vaccine was in every case so prompt and satisfactory that he felt impelled to report the cases and to urge others to give the remedy extensive clinical trial.

I have had splendid success in the treatment of infected wounds with vaccines. I use the streptococcus and staphylococcus mixed vaccines. One case was that of a nine months old baby who while crawling, got a needle in its knee. Nothing was done with it for a time. Finally they brought the baby to my office when I found fever, pus over the knee and a large swollen gland on one side of the neck. I lanced the abscess, placed a medicated packing and gave two small doses of strepto-staphylococcic vaccine at an interval of three days. There was no pus on the third day and the gland soon became normal in size.

I have not employed vaccines in puerperal infections, but according to well authenticated reports, a pneumo-strepto-staphylococcic vaccine transforms these cases. It should always be used. The colon bacillus vaccine is often indicated along with other vaccines already noted. Drs. Ulrich and Pfeiffer, of Detroit use the combined streptococcus-staphylococcus vaccines as a prophylactor with entirely satisfactory results. They give the vaccine not later than one day after confinement. According to Sherman, streptococcus-staphylococcus vaccine should be given to immunize against the organisms of mastitis. This vaccine is also given for phlebitis. It is recommended that vaccines, generally the streptococcus-staphylococcus with colon bacillus, be used for the different pelvic affections of women, such as metritis, cervicitis, vaginitis, vulvitis and other affections. I am using the gonococcic-staphylococcic vaccine in gonorrhea

with good results. I have had splendid success with typhoid vaccines in the treatment of typhoid fever and I use the mixed vaccine containing the typhoid and para-typhoid A. and B. In adults I inject 500,000,000 daily and let the patient eat toast, eggs and other soft food. Often in eight days the temperature is normal, though the vaccines and confinement to bed may need to be kept up for four or five weeks. I had an attack of typhoid fever myself, some three years ago. I used the combined vaccines twice daily for seventeen days and then once daily until forty-two days had expired. I went about each day and attended to my office and town work. I give medical treatment just as I did before using the vaccines. At intervals there is a mixed infection and it is necessary to use the streptococcic-staphylococcic with colon bacillus vaccine. I have relieved a number of cases of appendicitis with vaccines. Along with the vaccines I use the ice bag and rectal injections. In arteriosclerosis with high blood-pressure, I use vaccines with benefit. Vaccines are recommended in infections of the eye. I used them in one case of iritis along with the other treatment, with good results. It is believed that vaccines would be potent remedies in avoiding sympathetic ophthalmia. I have been having splendid results in some cases of skin diseases. I have used them successfully with other treatment in eczema, acne and boils. I am now treating a case of indurated acne in a young man with acne-staphylococcic vaccine and the face is rapidly clearing up. I had a short time ago a mass of small carbuncles to treat on the neck of a boy. I first opened and packed some of them and used internal and local treatment causing an improvement, but lumps somewhat tender still remained on the neck. I used two injections of streptococcic-staphylococcic with colon bacillus vaccine and cleared the neck. I have used vaccines successfully in two cases of urticaria. The second case was that of a young man attending school at Ames College. He was treated two weeks there with the conventional remedies, with no improvement. The young man came home and after leaving the train came to my office. He had much liver engorgement showing a colon bacillus infection and he had been suffering from "colds." I gave him a dose of streptococcic-staphylococcic with colon bacillus vaccine and an influenza, micrococcus catarrhalis and pneumococcic vaccine. He was much better the next day. On the third day I gave another dose like the first only larger, and the next day he was clean. I am now using vaccines and the positive

pole of a faradic battery in a case of herpes zoster, with good success.

In March of this year I treated a case of Henoch's purpura in a little child of three years of age with vaccines successfully. The child was attacked with German measles and during its course the urine was largely blood at one time and there were ecchymotic spots over the body and a hemorrhagic spot in the corner of one eye. I also treated an elderly lady during the present month for purpura, who had a high blood-pressure and a colon bacillus infection, as indicated by an engorged liver, with vaccines. Vertigo has been successfully treated with streptococcic vaccines.

In February of this year I had an old gentleman eighty-one years of age, who was taken with symptoms of meningitis. He had intense pain in the back of the head with retraction. I used influenza and catarrhal cold mixed with colon bacillus vaccines and hypodermic lobelia, recovery ensuing. In this present month I had a young lady patient with much the same symptoms and who was treated the same, with prompt recovery.

There is another vaccine of which I wish to speak—Dr. Sherman's "Killed Non-virulent Tubercle Bacilli." I had one case in which I used this. An elderly woman with a chronic bronchitis, had a little more than a year ago, a severe epistaxis and I was compelled to pack the nostrils. I sent a specimen of the sputa to Iowa City for examination and it was negative. I then secured a vial of Sherman's Non-virulent T. B. I injected 500,000,000 the first injection and then 1,000,000,000, but had no reaction and concluded that my patient did not have tuberculosis.

I wish to quote however, from Dr. T. V. Williams of New Castle, Pa., who has an interesting article on the treatment of Pulmonary Tuberculosis in the Bacterial Therapist for December, 1914. Dr. Williams, relates an experience extending over twenty years in the treatment of pulmonary tuberculosis. For several years he used a powerful search light in his office in the treatment of the disease. In this a beam of light was concentrated through blue glass on the infected lung, the blue color to cut off the heat rays. This light treatment did good work, both in chronic bronchitis and asthma, but in pure pulmonary tuberculosis failed to effect cures. He next used the Roentgen ray. With this he effected some cures. For four years he had used ozone by inhalation through oil of pine needles and oil of eucalyptus, and says there is consider-

able benefit in its invigorating properties. He is now using Sherman's Non-virulent T. B. with which he has splendid success. He cites one case which illustrates the good results from vaccines. A married woman, aged thirty years who had been coughing for two years and from the effects of consolidation of right lung and hectic fever, had lost considerable weight and strength, came under the ozone treatment. In addition to ozone she was injected every week with Dr. Sherman's Bacterial Vaccine for mixed infection accompanying pulmonary tuberculosis which contained killed streptococci-staphylococci aureus and albus, Friedlander's Bacilli, Micrococci catarrhalis and pneumococci (No. 36) Sherman's list. This patient lost her fever, regained her appetite and strength and put on twenty-four pounds of flesh, but did not lose all her cough. After two months she discontinued treatment about Christmas time. She continued to cough all winter. She was induced to take Dr. Sherman's latest addition "Killed Non-virulent Tubercle Bacilli" and to her great delight, after the fourth injection, the cough entirely ceased. Eight months later the patient was in perfect health. In closing his article Dr. Williams says:

I have come to the reasonable conclusion that in the X-ray, Sherman's Bacterial Vaccines and Ozone, we have three potent modalities for combating pulmonary tuberculosis.

As a dosage, most manufacturers put up their vaccines so that 1 cc. represents a maximum dose. I generally commence with one-half of this. Dr. Sherman says the range of dosage varies anywhere from five to ten millions to several hundred millions. Streptococcus vaccine is recommended in doses ranging from 5,000,000 to 200,000,000, typhoid vaccine therapeutically from 50,000,000 to 500,000,000, staphylococcus vaccine from 100,000,000 to 1,000,000,000 and so forth. There is generally tenderness at the point of injection and often redness. Sometimes there is pain and a few compresses wrung out of hot water are demanded. Some think that subsequent injections should be withheld until inflammatory symptoms have subsided, but I do not think so. If there should be a rise in temperature, and there is occasionally, wait until it subsides when the injections may be resumed. Some think that the more inflammatory reaction obtained, the better the results, but this is not true. I have many times had splendid results when there was no inflammatory reaction. Sometimes feelings of weakness come on, especially when given by the stomach, and I now generally give with the first injection at least, a capsule of spartine sulphate and strychnine. I occasionally

give it by the stomach when I cannot get them to use it hypodermatically, when I add one-half to one teaspoonful of whiskey or brandy. There has never been any trouble under this plan. The prevailing vaccines are the streptococcic, the staphylococcic, colon bacillus, pneumococcic, influenza, Friedlander bacillus and micrococcic catarrhalis. Different strains of the streptococci cause erysipelas, scarlet fever, puerperal infections, rheumatism, measles and tonsillitis. The staphylococcus is nearly always found on the skin according to Dr. Sherman. The colon bacillus causes liver engorgement, appendicitis, cystitis and other affections.

One word about phylacogens as compared with bacterial vaccines. According to Sherman, phylacogens are filtered products obtained from a large variety of pathogenic bacteria and are administered in large toxic doses as shown by the severe toxic reaction following their administration. Being liquid preparations, the toxic materials they contain penetrate every part of the body soon after administration which causes a toxic shock. Bacterial vaccines on the other hand are killed bacterial suspensions of the entire organisms in normal salt solution and quantitatively speaking are given in extremely small doses. The entire germs are injected into the tissues where the tissue cells gradually disintegrate them and while doing so develop the immunizing response incidental to such germ disintegration.

In writing this paper I have endeavored to cover the salient points of an immense field because of the great importance of vaccines as a therapeutic agent and because but few doctors, comparatively speaking, are using them to any extent.

DYSPEPSIA*

W. C. McGRATH, M.D., Eagle Grove.

The question might reasonably be asked what *is* dyspepsia, but like many other medical problems it would be easier to say what it *is not*. It is not organic disease of the stomach, since structural changes very properly fall under another nomenclature, neither can they be called functional.

Definition—Weakness of digestion; arrest or delay of digestion.

Forms—Acute, acid, atonic, alcoholic, fermentative, flatulent, intestinal, irritative, nervous, reflex, etc. In fact any organ can produce stomach symptoms. Every writer presents a dif-

*Read before the Austin Flint-Cedar Valley Medical Society, Eagle Grove, November 9, 1915.

ferent classification showing that there is no uniformity of opinion. Thus it will be seen that the term *dyspepsia* like the mantle of charity, is made to cover a multitude of ills. The kind of *dyspepsia* that I intend to speak of comes out of a clear sky without previous illness.

Symptoms—Symptoms are loss of appetite, distress after eating, a sense of fullness or of a load in the stomach, tenderness in the pit of the stomach, nausea and vomiting and sour eructations. Such symptoms are usually attributed to fermentation of food in the stomach. But *why* is food delayed and *what* is the cause of the stasis? It may be due to pyloric spasm or pyloric obstruction, from tumor or contraction caused by healed ulcer, or lack of motility of the stomach. Our first effort should be expended in determining the presence or absence of organic disease. If no structural changes can be detected then we must fall back on our old stand by "*dyspepsia*." But by careful analysis of symptoms in every case we will lessen the number falling under this head, and it is earnestly hoped that in the near future the word *dyspepsia* will be as much a misnomer as the term *rheumatism* is now. It is along such lines we must labor if we make any material progress.

Dr. Cabot says that out of 100 autopsies made at the Mass. General Hospital of patients whose records showed some form of stomach trouble, only 15% had lesions of the stomach. Analysis of 15,309 records of patients having *dyspepsia*, 12,612 were found to be nongastric and 2,697 were gastric. This latter list includes cancer and ulcer and anomalies of secretions, size and position of the stomach. The above list was divided as follows: failing heart, 2,922; phthisis, 1,929; anemia and chlorosis, 1,925; neurosis and psychoneurosis, 1,482; chronic nephritis, 1,197; gastric ulcer, 1,140; gastric cancer, 1,050; *dyspepsia* (unknown cause), 624; cancer of the bowel, 624; gall-stones, 620; constipation, 605; cirrhotic liver, 553; gastritis, gastroenteritis, alcoholic gastritis, 546; nervous *dyspepsia*, 459; duodenal ulcer, 360; gastrectasia, 271; lead poisoning, 174; gastropnoia, 130; hyperchlorhydria, 109; hypoacidity, 28; tabes, 22. A few points of diagnostic importance will be mentioned in connection with each.

Acute Indigestion due to indigestible food or alcoholic drinks. Relief is usually gained by emptying the stomach. Persons with tendency to repeated attacks or who are known to have a weak stomach, should be suspected of having some constitutional disease.

Failing Heart—It goes without saying that in the presence of failing heart, any treatment di-

rected to the stomach will be of no avail. If the heart can be strengthened by rest the indigestion will right itself. To treat a stomach for *dyspepsia* when the heart is failing, when the liver ducts are blocked or the lung crippled by exudates, is only shooting in the dark. Nothing should be expected from such treatment and nothing is ever gained.

Chronic Nephritis—Nephritis of the vascular type is much more likely to escape attention since it does not produce edema or obvious changes in the urine. Arterio-sclerosis of the heart and brain and high blood-pressure are frequently associated. Since the blood-pressure is so often taken, these cases are more easily detected. Indigestion of this kind is due to uremia and does not depend upon the presence or absence of food in the stomach. The nausea and distress will come on any time of day, after any kind of food or no food at all.

Pregnancy—Pregnancy should be considered a possibility in any woman not past the menopause. There is nothing characteristic about the stomach symptoms, as the same nausea and vomiting may be seen in alcoholism, phthisis, uremia and lead poisoning. Nothing short of a thorough physical examination will reveal the true cause.

Phthisis—Many writers have claimed that a period of *dyspepsia* precedes incipient tuberculosis. In the light of our present knowledge it would seem nearer correct to say that it is already tuberculosis. In the absence of any tangible evidence it would be well to place the patient under observation for a week or more, where his temperature could be taken night and morning, frequent examinations made of his lungs with a stethoscope and if necessary by the X-ray.

Gall-Stones—Gall-stones are often the source of confusion, especially when the pain is located in the pit of the stomach and not over the gall-bladder. Aside from cancer and ulcer, there is no disease of the stomach which causes more severe pain. Pain in the epigastrium that calls for morphine and is relieved promptly and permanently by morphine, is due to gall-stones. Gall-stone attacks often come on at night while true stomach trouble rarely begins at that time.

Anemia and Chlorosis—A large class of patients of all ages are afflicted with blood disease, and in the early stages manifest symptoms of enfeebled digestion. But fortunately we have a very reliable means of securing valuable information in examination of the blood. Such examinations should be done as routine in all cases.

Cancer of Bowel—Cancer of bowel is capable of producing any and all kinds of stomach trou-

ble, and should be earnestly sought for. Proctoscopic examinations of the rectum and X-ray examination of the bowel will generally be rewarded by finding the cause of the trouble.

Constipation—Just how much dyspepsia is caused by constipation is hard to determine. When we realize that it is the function of the lower bowel to retain fecal matter almost constantly, it is not easy to see how or when the so-called poisoning begins. Some people have a habit of moving their bowels every three or four days and yet enjoy good health. On which ever side the truth lies, it is apparent to every thinking doctor that great harm is done by the indiscriminate use of cathartics.

Lead Poisoning—Lead poisoning while common among factory workers, is rare in rural districts. However it should not be forgotten. Painters and printers are occasional victims. A careful search for the lead-line on the gums and stippling of the red blood cells is absolutely necessary.

Hyperchlorhydria—Hyperchlorhydria is evidenced by burning pain in the epigastrium and sour eructations. It is thought by some to be the early stage of peptic ulcer. Distress is worse when the stomach is empty and is relieved by food and soda. Often follows fatigue, worry, etc.

Subacidity—Subacidity, which is the opposite condition to the one just described, is not regarded as a serious matter by itself. Dr. R. C. Cabot says "One cannot help being somewhat skeptical as to the importance of secretion, its lack or excess, when we see how well patients with tabes or pernicious anemia may digest their food for long periods of time without any Hcl. discoverable in the gastric contents. When motility is good and secretion absent, as in diabetes, digestion seems to go on perfectly well."

Catarrhal Condition of the Liver—Headache, loss of appetite, discomfort after eating, nausea and vomiting, enlargement of liver, slight rise of temperature, and sooner or later, evidence of jaundice. The presence of fever should suggest to our minds the probable involvement of the liver or some other organ, as we have no disease of the stomach which gives a rise of temperature.

Chronic Appendicitis—Chronic appendicitis with its accompanying adhesions often causes symptoms of dyspepsia. Many patients, fearing an operation, will deny that they have had previous attacks. Pressure in the region of the appendix will bring out tenderness and should never be neglected.

Nervous Dyspepsia—Nervous dyspepsia seems to depend upon worry, mental or emotional over-

strain, for its origin. Common in neurotic individuals. Relieved by taking food. Vomitus consists of mucous mostly, showing proper digestion of food. May last for years. Patient seldom loses weight.

Arterio-sclerosis—Arterio-sclerosis generally occurs at middle life or later, and is usually detected by the presence of hardened arteries and high blood-pressure. However, the surface arteries may be soft and natural and yet have sclerosis of the arteries of the heart, brain or abdomen. The vascular crisis of Pal may furnish the only evidence of such conditions.

Brain Tumor—Brain tumor, in addition to dizziness, is likely to have changes in the fundus oculi, ptosis of the eye lid, one sided headache, a slow pulse, and low blood-pressure. Is generally found in young adults. Syphilis should always be suspected.

Tabes Dorsalis—With attacks of Dietl's crisis are often misleading. Many a fruitless operation has been done, putting the patient to needless suffering and expense, because the surgeon did not take the time to make a thorough examination and arrive at a correct diagnosis. Dietl's crisis resembles closely attacks of gall-stones, renal colic or appendicitis, and even where pupils and knee jerks are normal we may still have syphilis of the cord. Only lumbar puncture, examination of the spinal fluid and luetin tests will prevent errors.

Chronic Starvation—Many cases of indigestion are due to chronic starvation. Something the patient eats causes distress in the stomach and forever afterwards that article of diet is shunned. Then one food after the other is dropped until nothing is left but soups; and still pain goes on. A poorly nourished stomach will complain, and yet it must have food. Restricted dieting is the biggest humbug ever fostered by the medical profession on a long suffering clientele. Persuade your patient to bear the suffering incident to eating for the sake of the nourishment it affords, and you can hold out the hope that he will break his bonds and return to health. The old adage that a man is as strong as his arteries, might be transposed to read that a man is as strong as his stomach. Just as soon as the stomach ceases to functionate, the patient begins to lose strength and he will continue to lose until his stomach begins to work again. The more strength he loses the weaker his stomach, and the weaker his stomach the more he loses. Thus a vicious circle is established which cannot be broken until the general vitality is brought up to normal standard or nearly so.

The importance of this subject comes home to us when we consider that to us as general practitioners these patients are going to come first, and it behooves us to be watchful lest the golden opportunity be allowed to pass and the patient left to drift on to helplessness and hopelessness. We deserve but scant credit for making a diagnosis at the eleventh hour. By the aid of laboratory and the X-ray, and if needed, frequent consultations, we can show our interest and our willingness to do our utmost. I realize fully that it is often difficult to diagnose any disease in its early stage, but if we wait till the diagnosis is easy, it will be in many cases everlastingly too late. Too much care cannot be taken in getting a correct personal and family history. Give your patient time enough in which to tell his story in his own way, and do not brow beat him into making admissions that he does not mean. Do not anticipate the answer by asking leading questions. To cross examine a patient as though he was a prisoner at the bar and you the prosecuting attorney, is to take advantage of your position. Such history is apt to be faulty. Better try to make the case fit the history than to make the history fit the case.

The class of people so afflicted are entitled to our sympathy and many times would gladly pay our fee if we would take more pains in caring for them. Too often they are regarded as old chronics for whom there is no relief, or for a set of hypochondriacs who if they were cured would not admit it. The average doctor gives such a patient a perfunctory examination, advises him to observe certain regulations as to diet, and sends him away hoping that he will never come back.

If a doctor undertakes to diagnose such cases, he should do his work thoroughly. In addition to the history and physical examination, he must examine the blood and urine and spinal fluids, and occasionally make use of the X-ray. Not all cases will require such extensive investigations, but occasionally a case will be met where all kinds of methods must be used before a definite conclusion can be reached. He who does not want to work so hard had better refer those cases to the doctor who is not infected with trypanosoma.

ANNUAL MEETING OF AMERICAN MEDICAL EDITORS' ASSOCIATION

The annual meeting of this association will be held at the McAlpin Hotel, New York City, October 25th and 26th.

A most interesting program is in course of preparation and the local committee composed of the fol-

lowing members is an assurance of a successful convention: Dr. Thomas L. Stedman (Medical Record), chairman; Dr. R. H. Sayre (New York Medical Journal), Dr. Brooks H. Wells (American Journal of Obstetrics), Dr. Frank C. Lewis (International Journal of Surgery), Dr. Ira S. Wile (American Medicine). The officers of the association for 1915 and 1916 are as follows: President, Dr. Edward C. Register (Charlotte Medical Journal), Charlotte, N. C.; First Vice-President, Dr. W. A. Jones (Journal Lancet), Minneapolis, Minn.; Second Vice-President, Dr. G. M. Piersol (American Journal of Medical Sciences), Philadelphia, Pa.; Secretary and Treasurer, Dr. J. MacDonald, Jr. (American Journal of Surgery), New York. Executive Committee: Dr. C. F. Taylor (Medical World), Philadelphia, Pa.; Dr. John C. MacEvitt (New York State Journal of Medicine), New York; Dr. A. S. Burdick (American Journal of Clinical Medicine), Chicago, Ill.; Dr. Joseph MacDonald, Jr. (American Journal of Surgery), New York.

The meeting on October 25th and 26th will be devoted exclusively to problems of a strictly journalistic nature, of importance and interest to every editor and publisher of a medical journal. Among the papers to be presented are the following: "Editorial Control," "The Editor's Prerogative in Editing Original Articles," "Book Reviews in Medical Journals," "Problems of the Subscription Department," "The Relationship Between Medical Journals of the Day," "The Up-Lift in Medical Journalism," "The Influence of the Medical Press and Profession in Public Affairs," "The Rights of an Author in the Disposition of his Contribution," etc.

ADVANTAGES OF THE FLUSH AMPUTATIONS

The advantages of the flush method are:

1. Rapidity with minimum shock.
2. A plain open surface for dressing, which is favorable to the subsequent control of sepsis and which prevents pocketing.
3. Great diminution in the risk of secondary hæmorrhage.
4. The operation provides the best mechanical relief of gas tension by dividing all the tissues at right angles to the muscle planes.
5. It allows a temporary amputation to be performed close to the site of injury, so that a permanent amputation can be performed later (when sepsis is under control) a little above the injured area.
6. In cases associated with fracture the proximal end of the bone can be, and should be, left intact (that is, not sawn through) and projecting beyond the plane of muscle section, thus minimizing the risks of osteomyelitis and also providing a useful medium (a) for the application of pressure by means of dressing in case of hæmorrhage (a practical point of great value, (b) for moving and fixing the limb, (c) for the application of extension to the skin.

The Journal of the Iowa State Medical Society

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THE WINE OF CARDUI SUIT

The verdict in the case of the Wine of Cardui Company against the A. M. A. is not at all unexpected. The layman very naturally looks with suspicion on any contest between a commercial interest and a body of professional men, or even against an individual medical man. Attempts have been made in various directions to impress the public with the idea that the American Medical Association is a great medical trust, and is no more worthy of respect than any other kind of trust. It has not been an uncommon thing to hear expressions of that character from men of good standing in the community, and even from members of the Association itself, and so when one trust is pitted against another trust in the minds of the public there may be very little difference in the estimation in which these trusts may be held. On carefully reading the evidence without bias, we could not avoid the feeling that efforts on both sides were made to cloud the main issues, and make it appear that the association was engaged in a bitter contest against a financial combination that felt that their business was seriously damaged by an unwarranted attack by the Journal of the Association. We are not in the spirit of criticising the conduct of the trial nor of some of the allegations made by the Association Journal. The main question is what effect will the controversy have on the cause in which the Journal was engaged. The Association has devoted much attention to exposing fraudulent drugs, so-called foods, etc., which have been a burdensome tax upon the public, not only a tax,

but a source of danger in that these commercial drug houses have endeavored in every way to impose upon the misfortunes of the public and secure money by the most extravagant and fraudulent claims. It is clearly evident that an evil so widespread as the patent medicine evil cannot be reached by any other means than publicity. When the public has come to know the extent of the frauds committed upon them, they are quite likely to resent such frauds and avoid the perpetrators and thus bring about a decrease, and possibly at some time, destruction of the patent medicine trade.

Whether the Journal of the Association has been extravagant in its statements and has gone beyond the legitimate field of criticism, will, of course, be a matter of opinion, but so far as the public is concerned, it does not make the slightest difference which way the suit goes. The evidence is before the public and the public will decide on its merits. There does not appear to be anything in this verdict that will interfere with publicity methods in the future, and it will raise the question perhaps of whether or not a more temperate way of stating the case, will not accomplish as much good as the vigorous campaign the Journal has been engaged in for these several years.

We have no sympathy with the medical men, who for temporary gain, would ally themselves with the Wine of Cardui people, nor have we any part with medical journals that decry publicity methods of curing an evil which has passed entirely beyond the limits of logic and reason. We have neither condolence nor congratulations to offer as to the verdict itself, and only admiration for the spirit and courage of the men who have fought a winning battle all these years. We do, believe, however, that the same ends can be reached by less violent language and with less risk of getting into legal controversies that can do us no good and are only incidental.

EARLY MEDICAL JOURNALISM IN IOWA

Some time ago the Editor called attention to the fact that in 1850 a medical journal was published in Iowa under the title of Western Medico-Chirurgical Journal, and that four years later it was changed to the Iowa Medical Journal. The notice in the Journal was probably overlooked as I heard nothing from it. Then recalling the fact that Dr. S. W. Moorehead of Keokuk, former editor of the Daily Gate City, might be in possession of some definite information in relation to the early medical journal, we wrote and asked him to make a special investigation of some of the old medical libraries for some trace of these periodi-

cal. It gives me great pleasure to say that Dr. Moorehead instituted a search, and secured four copies of the journal. He also advised me that Dr. Fuller could give me some information on this subject, and on inquiry I received from the Doctor a very kind letter, in which he stated that he possessed a copy of the Western Chirurgical Journal, and very kindly sent me a marked copy of the Gate City which contained a review of four numbers of the Iowa Medical Journal by Dr. S. W. Moorehead.

Dr. Fuller is very fortunate in possessing this volume, the first attempt made in Iowa in the direction of medical journalism, and very naturally cherishes it as one of the most valuable of his literary possessions.

It may be recalled that the State Medical Society was organized in 1850 and held its first meeting in Burlington, June 19th. The first number of the Western Chirurgical Journal was published September 1, 1850, and contains the detailed minutes of the first meeting of the Iowa State Medical Society; the organization of the Keokuk Medical Society, and also many reports published.

OLD MEDICAL RECORDS

To the Editor of the Gate City:

I received a few days ago a letter from Dr. D. S. Fairchild, of Clinton, Iowa, Editor of the Journal of the Iowa State Medical Society, in which he stated that he was endeavoring to find some copies of the pioneer medical journals published in Iowa. "It appears," he wrote, "that in about 1850 the Medico-Chirurgical Journal was published in Keokuk, and afterwards was changed to the Iowa Medical Journal. I will be greatly obliged to you if you can do me the favor of investigating some of the old medical libraries there, the library of Dr. Hughes, Dr. Cleaver or Dr. Jenkins. I am trying to gather as many things as I can that relate to the early history of medicine in Iowa."

Investigation revealed the fact that the libraries of Drs. Cleaver and Jenkins had been disposed of and were not available, but that the Hughes library, one of the oldest as well as one of the largest in the state, is still intact in the Hughes homestead in this city. At my request Dr. D. L. Hughes kindly went through it carefully and succeeded in unearthing four copies of the "Iowa Medical Journal" published here in as many different years early in the latter half of the last century. He found no trace of any earlier medical publication in Keokuk. The first copy bears date of July, 1854, and was No. 12 of Volume I. The publication was conducted by the faculty of the medical department of the State University and was printed at the Whig Book and Job Office. The medical school here at that time was a branch of the State University and the only one of its kind in the west outside of St. Louis and possibly Chicago. The

faculty of the school in 1854 consisted of D. L. McGugin, M.D., professor of physiology, pathology and microscopy; Freeman Knowles, M.D., professor of theory and practice of medicine; J. C. Hughes, M.D., professor of surgery and dean of faculty; J. F. Sanborn, M.D., professor of chemistry and materia medica; E. R. Ford, M.D., professor of obstetrics and diseases of women and children; Edward A. Arnold, M.D., professor of anatomy, and P. Van Patten, M.D., demonstrator of anatomy. Dr. J. C. Hughes was editor of the journal. The contents of the publication were practical throughout and highly creditable to the contributors, among whom were Dr. McGugin, Dr. A. Hard of Aurora, Ill.; Dr. Sanborn and others. Keokuk institutions and firms represented in the advertising columns were the Keokuk Dispatch, published by D. B. Cuming, the Valley Whig at \$2.00 per year "with a larger circulation than any paper published in Iowa;" H. H. Ayres, druggist; R. B. Ogden, city book store; Dr. J. K. Rickey, dentist; Gillmore & McKenny, drugs; Thos. Davis, drugs, and M. W. Hicks, dentist.

The next number of the Journal available for examination was dated November and December, 1867, and was printed at the Gate City Book and Job Rooms. An article on the inside of the cover explains that "owing to the financial embarrassment of 1857 and '58 the Iowa Medical Journal, which had completed its fourth volume, was suspended for want of material aid." This was followed by the Civil War and later by the absence of the editor in Europe, which, it was explained, interfered with resumption of publication at an earlier date. At this date the faculty consisted of J. C. Hughes, professor of surgery; George W. Hall, professor of physiology, pathology and general therapeutics; H. T. Cleaver, professor of obstetrics and diseases of women; A. M. Carpenter, professor of practice of medicine; E. J. Gillett, professor of chemistry; Edward Clapham, professor of microscopy and demonstrator; D. Mooar, lecturer on medical jurisprudence, and L. C. Ingersoll, lecturer on the principles of dental science. Perhaps the most interesting feature of this number was a report made to the State Medical Society by Dr. J. C. Hughes of a case which occurred in his practice in this city in 1856. The case was that of Mr. James H. Dimond, who, in October in that year, at the age of thirteen, was thrown from a horse cart and sustained the fracture of a thigh. The case was treated scientifically and with good results, but after two months, following indulgence in winter sports, the leg was found to be shortened and crooked. In the summer of 1857 Dr. Hughes broke the leg and reset it. The report says: "So determined was the patient to have the operation performed that when upon the operating table, just before commencing the administration of chloroform, he used the following significant language. "Here goes for a straight leg or a dead boy." The report continues: "His health improved, the leg became strong; and in a few months I found him acting as bell boy in one of our hotels, making good time either up or down a stair case. At the outbreak of the war, he applied

for admission to the ranks, but his age prevented. Determined to serve his country in some capacity, he became mess boy to the officers, and discharged his duties faithfully until the latter part of 1862, when he again offered himself as a volunteer, was accepted and mustered into the Thirtieth Iowa Infantry. He was prompt and faithful as a soldier, always at his post, and in that memorable charge on the twenty-second of May, 1863, at Vicksburg, he was among the number of brave boys who paid the forfeit with their lives. May his name live with his country, and his courage and bravery mark an epoch in surgical science." Among the advertisers in this number of the Journal were Kerr & Fuller, F. H. O'Connor, Christfield & Co., John T. Wilkinson and Wilkinson & Bartlett, druggists, M. W. Westcott and Ed. S. Carter & Co., books and stationery, Sam G. Bridges, jeweler, and two hotels, the Deming house and the Tepfer house.

The third number at hand, bearing date of January-April, 1868, is given over in the main to the publication of papers read before the State Medical Society.

The fourth number, for January and February, 1869, gives considerable space to an article on "The Nature and Uses of Carboic Acid," which was then a new agent in medical and surgical practice. Leading articles were contributed by Drs. G. W. Hall of Carthage, Ill., Hughes and Carpenter of Keokuk and J. F. Grimes of Wapello, Iowa. The withdrawal of Dr. Sanford from the profession was announced with regret. There were thirty-one graduates from the medical college at the preceding session; number of matriculants, 120. The earliest number carried on its front cover page a picture of the first medical college building on Palean street between Second and Third, and the other numbers a picture of the later building at Seventh and Blondeau where the Masonic Temple now stands. The old journals are quite a curiosity in their way.

S. W. MOOREHEAD, M.D.

FAMOUS AMERICAN PHYSICIANS

The editor of the Indianapolis Medical Journal, indulges in a spirit of medical retrospect in referring to three generations of Flints, and brings to mind methods of practice and medical teaching once in vogue but has now disappeared. Brilliant writers and brilliant speakers found advantage in an itinerary which would be impossible now. The brilliant lecturer was sought after by medical schools as a drawing card in the days when all medical colleges in this country were private enterprises.

Austin Flint, Sr., the author of one of the most readable works on Practice produced in this country when symptomatology and treatment were the things sought after by the medical practitioner, graduated M.D., from Harvard in 1833, practiced in Boston three years, then moved to Buffalo; edited the Buffalo Medical Journal for ten years,

and was Professor of Practice in Rush and in Buffalo 1844, then Professor of Practice for four years in the University of Louisville, and the winters of 1858-61 taught Clinical Medicine in New Orleans, and then returned east to New York in 1859, where he practiced the remainder of his life.

The Indianapolis Medical Journal states that 100,000 copies of Flint's Practice were sold before the eighth edition appeared, and in those years no practitioner felt sure of himself until he had read Flint's Practice.

Then came Austin Flint, Jr., a famous teacher in physiology, born in 1836, and followed his distinguished father through his western life. He studied in Louisville, graduated from Jefferson, and finally brought out his five volumes on Physiology, covering the periods from 1870-1874. Austin Flint, Sr., and Austin Flint, Jr., were striking and impressive men, and their sayings carried conviction to every open mind.

Then comes Austin Flint, the third, Professor of Obstetrics and Clinical Professor of Gynecology in the University of Bellevue Medical College. He has reached a high place in the profession, which promises to equal that of his two distinguished ancestors. The influence of the three Flints, covering a period of fifty years in American medicine, has perhaps never been equalled. Four great works, one the Practice of Medicine, representing three different nationalities, have stood first in the estimation of the medical profession: Flint, the American; Osler, the Anglo-American; Strumpel, the German, and Dietulafoy the Frenchman. These works in their day have filled the first place in the minds of the practitioner of internal medicine. Ponderous systems of medicine have been published, and offered to the profession as great commercial adventures; that the single volume work illustrated by the four great authors have filled the place which none of these ponderous works can. The editor of the Indianapolis Journal raises the very pertinent question "Why do medical graduates buy systems, bulky, costly, scattering, and push aside those titanic works which stand as great novels in their unity and personality as compared with hashed-up collections of short stories?"

It is a pleasure to read Editor Brayton's meditations on the greatness of some of the familiar heroes who have made the practice of medicine a living science.

"GUILLotine" AMPUTATIONS

The Edinburgh Medical Journal takes mild exceptions to the emergency no-flap amputations. The writer can see no reason why a short flap

amputation without suturing will do just as well in most cases. In any event strict regard must be had for the application of artificial limbs and where no flaps are provided for, a re-amputation as soon as the wound is clean should be done in the most artistic way. This is important for state reasons in time of war, where so many are liable to serious handicap. The memorandum sent out for the guidance of younger medical officers is to make short flaps without suturing when near a joint as the re-amputation is liable to sacrifice more bone, which may be illy spared. Amputation through joints is objected to as not affording as good a stump for an artificial limb; it is better to amputate just above the elbow than through the elbow joint. The forearm should be amputated by a short anterior and posterior flap. If possible the arm should be amputated at least two inches below the shoulder joint. The Syme's is advocated as the best amputation in the region of the foot and when necessary Chopart's, Lisfranc's and Pirogoff's are capable of giving good results. The best amputation through the leg is about four inches below the knee as it gives a better stump than one lower. The memorandum goes on to state that as a general rule an artificial limb should not be fitted until four months after the amputation. It is further stated that the exigencies of the field and infection may seriously interfere with ideal methods but future results must always be considered.

REPORT OF COMMITTEE ON SOCIAL INSURANCE

The Journal of the American Medical Association for June 17, page 1951, contains a report of the Committee on Social Insurance through its Chairman Dr. Alexander Lambert of New York City. The report covers thirty-six Journal pages and is an exhaustive resume of Health Insurance as it exists in European countries and in Australia. The report also gives an account of the plans of fraternal insurance in this country, and a general plan of state social insurance applicable for the United States together with a model bill for legislative enactment. Social insurance has been operative in many European countries for thirty years and it is expected that shortly the more progressive states in our country will take it up. The matter is already under consideration in Ohio, California, New York, Massachusetts, and New Jersey. In the three last mentioned states, bills were introduced this year, and in Ohio a bill will probably be introduced next winter. Just what influence this legislation will have on the practice of medicine it is now difficult to de-

termine. It is sure to come whether we will it or not. We would suggest that every doctor who is dependent on his practice, read the committee report carefully.

TECHNICALLY GUILTY—MORALLY JUSTIFIED

A little after 10 P. M., Thursday, June 22 and after being out nearly a week, the jury in the Wine of Cardui case brought in a verdict for the plaintiff and assessed the damages at 1 cent. The Chattanooga Medicine Company charged the American Medical Association with having libeled it when The Journal declared, among other things, that the business had been built on deceit, and that Wine of Cardui was a vicious fraud. For this alleged libel it asked that it be given \$100,000.00; it was given \$0.01. As most of our readers remember, two suits were originally brought against the Association and the Editor of The Journal. One was a personal suit for \$200,000, brought by John A. Paten, formerly chief owner of the Chattanooga Medicine Company; the other was a partnership suit for \$100,000 brought by John A. Patten and his brother, Z. C. Patten, Jr., doing business as the Chattanooga Medicine Company. The suits were based on two articles that appeared in The Journal, April 11, 1914, and July 18, 1914, respectively. The cases came to trial March 21, 1916. On April 26, in the middle of the trial, John A. Patten died, and the personal suit was automatically abated. The partnership suit, however, was continued and this case went to the jury Friday, June 16. The case is by far the most important of its kind that has ever been tried. In addition to 498 depositions which the "patent medicine" concern took through the South from women and from doctors of a certain type, the company also put 97 witnesses on the stand to testify in its behalf. The American Medical Association took only 8 depositions, but did put on the stand 93 witnesses, among whom were some of the best known physicians in the country. The trial and the fact that led up to it could furnish texts for many interesting comments. The spectacle of a scientific organization, in its attempt to safeguard the public health, having to assume responsibilities that rightly belong to state or federal agencies, is but one of several anomalies that characterize this case. Viewing all the facts in the case and remembering the heavy damages asked by the plaintiff, the medical profession may interpret the verdict thus: Technically guilty; morally justified! To the Association a moral triumph; to the "patent medicine" interests a Pyrrhic victory.—Journal of the American Medical Association.

THE NATIONAL DEFENSE BILL AND THE ARMY MEDICAL SERVICE

The national defense bill, signed by the president, June 3, fixes the proportion of medical officers at seven to each thousand of the enlisted strength of

the army. This proportion, which existed at the outbreak of the Spanish War and was again restored in 1908, has been seriously reduced through gradual increase of the army, until the enlisted strength had grown 35 per cent. without the addition of a single medical officer.

The new law provides for a definite ratio rather than for a fixed number of medical officers. This will automatically prevent any changes in the ratio in the future. The period of service required of medical officers before promotion to the grade of captain has been increased from three to five years. The medical reserve corps is abolished one year after the passage of the act. Officers of the reserve corps may be appointed to the medical section of the officers' reserve corps, in which body commissions may be issued in three grades—lieutenant, captain and major. Officers of the dental corps are open to promotion to the grades of captain after eight years' service, and to that of major after twenty-four years' service, subject to the same examination conditions as obtain in the medical corps. Veterinary surgeons of the army are formed into a separate corps attached to the medical department, and are given promotion to the grade of major. The hospital corps is hereafter to be known as the enlisted branch of the medical department, and several new grades, such as master hospital sergeant and hospital sergeant, are created. Through a reduction in the proportion of privates first class in this department, the pay of 75 per cent. of the enlisted men in the medical service will be reduced from \$18 to \$16 a month. As the care of the sick is not particularly attractive work to the ordinary soldier, this reduction will probably increase the difficulty of obtaining recruits of fit character and intelligence for the medical service. The new law does not provide any promotion for medical officers above the grade of colonel, except the single position of Surgeon-General of the Army. Provision is made for the assignment of five officers of the medical corps for duty with the medical relief department of the Red Cross, and the erection of storehouses by the Red Cross on military reservations or the use of government buildings as such storehouses.

The new law is highly satisfactory in that it establishes a permanent ratio between medical men and enlisted men, provides for an efficient medical reserve, raises the standard of dental and veterinary surgeons, and improves conditions regarding promotion and grade. It is unsatisfactory in that it reduces the pay of enlisted men in the medical corps and so increases the difficulty of securing satisfactory nurses and attendants in military hospitals. This defect, however, can readily be remedied by later amendment.—*Journal A. M. A.*

THE MEDICAL TEACHER

W. T. Councilman, Boston (*Journal A. M. A.*, June 24, 1916), gives rather entertainingly his later reflections on medical teaching based on his own experience.

He criticizes the educational systems of this country as compared with that of Germany, and attributes it largely to the inadequate rewards and prospects of the teaching profession. During part of his teaching career he has observed both college graduates and those who had otherwise passed entrance requirements, and so far as he has been able to judge the A. B. men are the better. They represent a selection and are favored by heredity to a large extent. Still, he finds that a large proportion of those who have attained distinction have not had the college degree, and he has been impressed with the evidence which college men often present of a lack of thoroughness in the instruction they have received. After two or more years of study of French and German, for instance, they have acquired no facility in the use of the languages. They are also incapable of close and accurate observation, and show a singular lack of facility and clearness of description. The chirography in the papers and exercises they are called on for also almost enables one to classify the students. It is for the most part indistinct and without character. Often only the beginnings of the words are written out, and the matter is badly expressed, and often obscure and diffuse. The method of analysis, the resolution of a problem into its components, a study of these and the reassembling, must be taught over and over again. The students do not seem to learn the use of books, and they have too little enthusiasm or desire to follow up the subject. He had thought something might be learned from a statistical inquiry regarding the colleges where the men were educated previous to their entry into the medical school, and to this end he has gone over the graduating classes of the last ten years, comparing the standing of the men while in school with that while in the colleges. Councilman does not, however, attach much importance to the findings; they represent mainly a small number of New England colleges, and out of the total of 105 educational institutions, sixty-two had but one representative. He is one of those who believe teaching should be a paramount interest in life when once engaged in, but the ideal of students seems to be research, and he asks, "why not research with teaching?" The object of medical teaching is to fit men to be of service in all the relations of man to disease. It is obvious that this requires many different kinds of medical men, and the question arises how early this differentiation shall begin. Surgeons, internists and specialists will be called for, and Councilman answers the question whether or not all these needs can be met by a medical school by saying, "Yes, provided the age period be shortened and the pre-medical education be better adapted to the medical needs. Medical education must provide that the main facts of body structure and function shall be firmly acquired and also constant exercise in the study of disease and practice in methods. The essential of the medical school education is the laboratory, and this requires a large number of instructors for the students as they are at present received. The lecture is an important part of teaching, provided its

function is understood, not as a substitute for objective study but to expand and co-ordinate the knowledge already acquired, and it must also interest and stimulate. Next above the lecture in value comes the demonstration, and oral recitation is also a valuable exercise if it can be used in such a way as to bring out the student's ideas and correct those which are faulty. Lack of teachers might be helped out by the aid of student instructors, for teaching is a valuable discipline for the student. Those in need of the small pecuniary recompense might be selected. In conclusion, Councilman speaks of the attractions offered by the medical profession and its disadvantages. At present it is overcrowded, the income is small and failure is easy. "No man can hope to succeed in it without industry, good mental endowment and without the possession of the quality of mind which recognizes, appreciates and seeks knowledge. To all this might well be added that he must have interest in and sympathy with his fellow man."

INFLUENCE OF STRYCHNIN AND CAFFEIN ON THE HEART AND ARTERIES IN ACUTE INFECTIOUS DISEASES

Dr. L. H. Newburgh in the Archives of Internal Medicine for March, 1915, reviews the evidence in relation to the alleged effect of strychnin and caffein in acute infectious diseases. It has been generally believed by practitioners that strychnin possesses great therapeutic value in supposed "heart failure" in a certain class of acute diseases, and has been widely administered as a most valuable heart stimulant. For some years serious doubts have been expressed by certain observers as to the truth of this contention. In one of the earlier numbers of the Journal for 1916 an elaborate paper by Dr. Chase of Iowa University, held that strychnin had no value in medicinal doses which was in exact accord with much experimental evidence. Dr. Newburgh after a series of experiments with strychnin and caffein, comes to the following conclusions:

1. Strychnin sulphate, in medicinal doses, does not increase the output from the heart, slow the pulse or materially raise the blood-pressure. There is no logical basis for its use as a cardiovascular stimulant.
2. Caffein-sodio-salicylate, in the doses employed, does not raise the blood-pressure or slow the pulse. The method does not permit us to say whether caffein increased blood flow in the cases studied.

THE STAGES OF DEVELOPMENT OF LIGATURES

The ligature had to travel a long road before it was established as the best and surest means of checking hemorrhage. The first account of the application of the ligature for this purpose is given by

Susrutas in his Ayar Vedas (1500 B. C.). He tied the umbilical cord of the newly born infant with a string eight inches from the naval previous to cutting it. (Senn.)

Celsus (30 B. C.—45 A. D.) applied two ligatures to the bleeding vessel and divided it between them. When he could not ligate in these cases, he advocated the use of the cautery.

Aetius (500-550 A. D.) ligated for aneurysm, excising the sac, although he used a red-hot iron to stop bleeding in excision of the breast.

Kirkland (1721-1798 A. D.) asserted that "nothing can more powerfully intersect the course of the blood than a ligature." He advised the use of the ligature made of lone "twelve-penny flax," with the ends waxed so that it would pass through the eye of the needle.

Sharpe, a surgeon of Guy's Hospital, in London, suggested the use of the ligature in 1761.

In the early use of the ligature, suppuration was considered necessary in order to facilitate its removal, for which purpose both ends were brought out of the wound. Later, some surgeons cut off the ligature close to the knot, but it was discovered that the ligature, after performing its duty, created an irritation and led to the development of an abscess.

In 1889 Agnew stated that "the knots, not being aseptic, act as irritants, retard healing, provoke abscesses, and are subsequently discharged from the wound. So the plan of cutting both ends of the ligature close to the knot may be regarded as an unsurgical procedure."

Philip S. Physick (1768-1837) was one of the early users of animal sutures. He used dog-skin and chamois cut into strips.

Sir Joseph Lister introduced the antiseptic or aseptic ligature. Since his day the same kind of violin string gut has been subjected to over one hundred different methods of sterilization in the hands of different experimenters and operators. Experimenters for years struggled with the problem of sterilizing catgut and keeping it sterile, and with few exceptions failed.—Red Cross Notes.

THE NATIONAL BOARD OF MEDICAL EXAMINERS OF THE UNITED STATES

The need of a standard medical examining body for the whole United States and its Territories (tributary thereto) has occasioned the organization of The National Board of Medical Examiners. It is a voluntary board, the members of which are selected from the Medical Corps of the Army, the Navy, and the Public Health Service, the Federation of State Examining Boards, and other representative organizations, and the medical profession of the United States.

The aim of this Board is to establish a standard of examination and certification of graduates in medicine, through which by the co-operation of the individual Boards of Medical Examiners, the recipients

of the certificates of the National Board of Medical Examiners may be recognized for licensure to practice medicine.

The policy of the Board is to conduct its examinations on a broad scientific basis of such a high yet practicable standard that the holders of its certificates will receive universal recognition.

The independent action by the Board is furthered by the financial and moral support of the Carnegie Foundation.

The original Board consisted of fifteen members, as follows, and remains unchanged, except for the loss of the founder and secretary Dr. Rodman, who died on March 8, 1916. At a meeting June 13, 1916, Dr. W. L. Bierring, of Des Moines, Iowa, was elected to the Board.

Surgeon-General—W. C. Braisted, U. S. N., President.

Dr. W. L. Rodman—Secretary.

Colonel Louis A. LaGarde, U. S. A., Ret.—Treasurer.

Surgeon-General—W. C. Gorgas, U. S. A.

Surgeon-General—Rupert Blue—U. S. P. H. S.

Medical Director—E. R. Stitt, U. S. N.

Assistant Surgeon-General—W. C. Rucker, U. S. P. H. S.

Dr. Herbert Harlan—Federation of State Medical Examining Boards.

Dr. Isadore Dyer, New Orleans, La.

Dr. Victor C. Vaughan, Ann Arbor, Mich.

Dr. Henry Sewall, Denver, Col.

Dr. Louis B. Wilson, Rochester, Minn.

Dr. E. Wyllys Andrews, Chicago, Ill.

Dr. Horace D. Arnold, Boston, Mass.

Dr. Austin Flint, New York, N. Y.

The permanent organization of the Board will consist of the three Surgeon-Generals and one other representative from each of the Government Medical Services, three representatives of the Federation of State Medical Examining Boards, and six members chosen at large from the medical profession by the National Board of Medical Examiners.

The official domicile of the Board is Washington, District of Columbia.

Requirements—Requirements for admission to the examination. Satisfactory completion of—(a) High School. A four-year high school course. (b) College. Two years of acceptable college work, including physics, chemistry, biology, and a modern language. (c) Medical School. Graduation from a Class "A" medical school. (American Medical Association classification.) (d) Hospital Training. One year as interne in an acceptable hospital or laboratory.

The above requirements apply to graduates of medical schools in 1912 and thereafter. The Board may accept equivalent credentials in the case of graduates previous to 1912.

Examinations—The Board has been given spacious rooms in the Army Medical Museum for conducting its examinations. They will be conducted primarily by members of the Board, and will be written oral,

and practical, including the examination of cases. In addition to the written examinations held in the Army Medical Museum, oral, written, and laboratory examinations will be held also in the Army and Navy Medical Schools, and in the Hygienic Laboratory of the Public Health Services, these facilities, as well as the Government Hospitals wherein will be held clinical examinations, having been placed at the disposal of the Board for the purpose.

Credentials must be presented to the Board sufficiently early for investigation. If adequate time is not allowed for this purpose, credentials may be rejected.

The following subjects will be included:

1. Anatomy—Microscopic, embryology, histology and organology, neurology. Gross—Osteology, dissection. Applied—Regional, topographical, surgical.

2. Physiology.

3. Chemistry and Physics—Organic, physiological, physics.

4. Pathology and Bacteriology—Bacteriology, microscopic pathology, gross pathology, surgical pathology.

5. Materia Medica, Pharmacology and Therapeutics—Materia medica, pharmacology, therapeutics and prescription writing, electrotherapeutics, including radiotherapy.

6. Medicine—Theory and practice, physical diagnosis, laboratory diagnosis, diseases of nervous system, including psychiatry, diseases of children, tropical medicine.

7. Surgery—General, including minor surgery, operative surgery, special surgery—Ear, nose and throat, eye, genito-urinary, orthopedics, radiology, skin diseases, syphilis and venereal diseases.

8. Obstetrics and Gynecology.

9. Hygiene and Sanitation—Sanitary science, epidemiology, vital statistics, state medicine.

10. Medical Jurisprudence.

Subject Values—1. Anatomy, 100. 2. Physiology, 75. 3. Chemistry and Physics, 75. 4. Pathology and Bacteriology, 100. 5. Materia Medica, Pharmacology, and Therapeutics, 75. 6. Medicine, 200. 7. Surgery, 200. 8. Obstetrics and Gynecology, 100. 9. Hygiene and Sanitation, 50. 10. Medical Jurisprudence, 25. Total, 1,000.

Passing grade is an average of 75 per cent.

A candidate receiving a mark below 50 per cent. in one subject or below 65 per cent. in two subjects, fails.

Candidates failing at the first examination may register for a second examination at the end of one year. A third examination will not be allowed.

It is expected that the examination will cover about one week.

No fee is charged for the examination itself, but a registration fee of five dollars will be required.

The first examination will be held in Washington, beginning October 16, 1916.

Certification—Candidates who have been successful in passing the examination and are approved by the Board, will be granted certificates.

This certificate is not a license to practice medicine, nor does it exempt the holders thereof from complying with the legal requirements of the states in which they desire to practice; but it will be evidence of high attainment in medical knowledge; and will, the Board believes, soon be accepted by State Board as evidence of qualification for licensure.

Resolutions endorsing the National Board of Medical Examiners have been passed by the following:

The American Medical Association.

The Council on Medical Education of the American Medical Association.

The American Association of Military Surgeons.

The American Roentgenological Association.

Southwestern Medical Association.

Mississippi Valley Medical Association.

Southern Medical Association.

Clinical Congress of Surgeons of North America.

Western Surgical Association.

St. Louis Medical Association.

Milwaukee Surgical Association.

Seaboard Medical Association.

Harrisburg Academy of Medicine, etc.

Southern Surgical and Gynecological Association.

Southern Medical Association.

Further information and application blanks may be obtained from the Secretary, Dr. J. S. Rodman, 2106 Walnut Street, Philadelphia, Pa.

HEALTH INSURANCE

Is a plan which has been suggested to provide medical, surgical, nursing and hospital care, besides necessary drugs and appliances, for the wage earner who makes less than a \$100 a month and who frequently is unable to afford the services of a physician. In addition to the above, it also provides cash benefits during the period of disability. Medical care for the family of the insured and obstetrical aid in confinement cases are likewise included.

The method contemplates the payment of certain small sums as a premium in varying percentages from the employer, employes and the state, all moneys to be governed and dispensed by Social Insurance Commissions or Societies. To be effective, the insurance will be compulsory and under strict government supervision.

Provision for medical aid is to be made by means of (1) a panel of physicians to which all legally qualified physicians shall have the right to belong and from among whom the patients shall have free choice, subject to the physician's right to refuse patients on grounds specified under certain conditions; (2) salaried physicians in the employ of the commissions; (3) district medical officers employed for prescribed areas; or (4) a combination of the above methods.

Bills embodying drafts of health insurance plans with the objects above outlined in view have recently been presented to the Legislatures of a number of states—Massachusetts, New York, New Jersey, and

Congress, while California already has an official commission actively at work and the movement is strong in Ohio.

The question of health insurance is regarded as an important step in the direction of disease prevention and improvement of the health of the community, and the matter has been regarded by the American Medical Association as of sufficient importance to recently organize a committee of Social Insurance, with Drs. Alexander Lambert and I. M. Rubinow, both of New York City, as chairman and executive secretary, respectively. As the latter states: "The matter also concerns the medical profession because of the possibility of far reaching changes in its relation to the community at large."

European experience, where the law is mostly compulsory, shows that no country in which health insurance has been introduced has abandoned it, because it seems to be the "only method to reach the poorest and the most improvident workers, who obviously most need the benefits offered by an insurance scheme."

GANGRENE OF THE LUNG AFTER TONSILLECTOMY

In the January issue of the Interstate Medical Journal, H. Wessler, of New York, reports eight cases of gangrene of the lung following tonsillectomy, which he observed during the past year. In each case the operation had been performed under a general anesthetic. The mechanism of infection is probably by aspiration of infectious material from the diseased tonsils during the operation.

CANCER AS A PROTEAN DISEASE OF UNIFORM SIGNIFICANCE

The habit of regarding cancer as a protean disease of uniform significance may well be abandoned in the interests of progress. When cancer research properly occupies itself in the study of the distinctive features of different cases of malignant disease, especially when it abandons the idea of a universal cure for cancer, it will be in accord with sound pathological sense. It will then not be necessary to talk wisely to the public about the obscurities of cancer etiology, or speculate about why cells grow lawlessly. Concerning the ultimate nature of neoplastic overgrowth we shall never have more than a descriptive knowledge.—James Ewing.

SOME REFLECTIONS FROM THE SURGERY OF THE WAR IN EUROPE

Those who listened to the address on Surgery before the International Medical Congress at London by Prof. Harvey Cushing, were profoundly impressed by the learning, the beauty of diction and the earnestness of the reader. In the June, 1916 number of the Military Surgeon, Dr.

Cushing expressed some amusement at the complete reversal of what he said in relation to military surgery in 1913 and what has come to pass in 1915 and 1916. Then the medical officer was to be armed with a microscope, to be a follower of Reed, Ross and Gorgas, but it turned out that he was to be armed with the scalpel and a follower of Pare von Esmarch, Pirogoff and Larrey; that the missiles come so fast and thick that the soldier has but small chance to get sick. In war in a short three years the medical officer lays aside the microscope, takes the scalpel and wonders what he ought to do. Only a few of the ablest and best trained surgeons can answer the question, and then with some hesitation.

In the war in Europe the Army Medical Officer of three years ago is of value chiefly as an executive officer; the real need is the experienced surgeon of the widest surgical conceptions, and the highest degree of specialized skill. How fortunate for humanity that surgeons of the skill and ability of Harvey Cushing, Crile, Fred Albee (who sailed for Paris July 1) and Riles Eastman, could see their way clear to lend their aid to soldiers fighting for their country. All too little of this kind of surgical skill will reach them.

Dr. Cushing, in the Journal referred to, takes up the consideration of cranial injuries and brings forward the question of how much should be done at the first line hospital before removing the patient to the clearance or base hospital. It may readily be accepted that any surgical procedure of cranial and brain injuries short of a thorough neurological and X-ray examination, will be followed by many disasters. But there are no facilities at the first line hospital and in many of the clearance hospitals for this kind of work, and the very serious question arises of doing an incomplete operation, as the removal of foreign bodies from the brain and the elevation and removal of fragments of bone from the brain and then evacuating the patient to a distance to a fully equipped hospital. Another effect which may follow a precocious operation (as Cushing calls them) is to give a false sense of security and delay evacuation to a properly equipped field or base hospital, for it may be found later that foreign bodies or a bullet lies in the brain beyond the field operated and gives rise to infection and death. On this particular point we extract from Dr. Cushing's paper in *Military Surgeon* June, 1916, page 609.

Sargent unquestionably has had the widest experience of all, and the facility, rapidity and assurance with which a large number of these cases may be handled, any one of which would tax the judgment

and consume the time of the inexperienced, is a lesson in the effectiveness of specialization in wound types. He not only advocates the closure of the wound but expresses the opinion that the best time and place for operation, taking all possible risks into consideration, is from two to four days after its inception and after transfer to a well-equipped base hospital. This is the impression gained also from the brief report by Marburg and Ranzi of their experience in Eiselsburg's Clinic. Could men with the judgment, neurological experience and skill of Ranzi, Barany, de Martel and Sargent be present in all field hospitals, these conclusions might necessarily be altered, but this is obviously impossible.

It is difficult to believe that the uncertain results of these precocious field hospital operations can be attributed, as they so often are, to the necessity of early evacuation and the disturbing effects of transportation, for this at least is quite contrary to my own experience with the transportation of patients suffering from serious intracranial lesions with tension due to other causes.

It is much more probable that the evacuation of these cerebral cases a few days after an incomplete operation is apt to coincide with the occurrence of a spreading meningeal infection.

Some of the cases to be recorded will show very well how, with an extensive injury which necessitates an elaborate operation with wound closure, the patient's chances are often better with a delay, even of several days, than with the usual incomplete study and operation to which most first line hospitals are necessarily restricted. Only under exceptional circumstances should a cranial operation for a gunshot wound be undertaken without a primary neurological study and X-ray examination, or in the absence of a skillful anæsthetist and the elaborate operative paraphernalia which a cranial decompression or exploration require, or under circumstances which prohibit a prolonged subsequent period of observation. I believe that though an immediate operation might save one or two per cent. which could not reach a suitable base, 10 or 20 per cent. could be spared the late sequelæ of these injuries if their primary operation, even with a delay of two or three days, could be done under ideal auspices.

These observations would appear at first unsound but a little reflection will show that an incomplete operation leaving fragments of bone or matter which could only be revealed by X-ray examination, could not be successful and furthermore the immediate transportation of a patient after a trephine operation is extremely dangerous. It would, therefore, appear that better final results will come from immediate evacuation of a serious cranial injury with a delay of two or three days to a fully equipped hospital than to do an immediate operation with the uncertainty of not knowing just how much injury has been inflicted or how much should be done.

CONCERNING INDUSTRIAL COMPENSATION IN OHIO

During the first eighteen months the compulsory provision of the Ohio workmen's compensation was in effect:

Nearly \$750,000 was paid out for medical and hospital attention by the industrial commission and by employers carrying their own insurance under the state plan.

Claims of 100,003 injured employes or families of deceased employes were allowed.

The total amount of money awarded from state insurance fund was \$4,401,986.16.

Forty-six dollars and seven cents was the average award for medical and hospital expenses not including the hospital and medical expenses of employers under the safe insurance plan.

Two hundred dollars, the maximum amount, was awarded for hospital and medical expenses in sixteen of the 616 fatal cases in which awards were made.

Infection was reported as having occurred in 9,024 of the 100,003 accidents—nearly 10 per cent.

Thirty-seven cases in which infection was reported resulted fatally, twenty-three of them occurring in connection with trivial injuries.

Three hundred and eighty-five claims were allowed for total or partial loss of vision in one or both eyes. Of this number, sixty-nine were the result of infection.

The hour of most frequent occurrence of accident in the forenoon was from 10 to 10:59 and in the afternoon, from 3 to 3:59.

More accidents occurred on Monday than on any other day in the week.

Falling and shifting objects, with a total of 36,193 victims, were the cause of more accidents than any other factor enumerated in the cause class.

Awards were made for accidents in every county in Ohio. Cuyahoga, with 24,750 claims and \$903,682.48 in awards, heads the list of counties.

The total number of claims disallowed by the commission was 7,986.—(The Ohio State Medical Journal.)

HONORARY DEGREES TO PHYSICIANS

At the commencement exercises of the various American Universities during the commencement week, it has been noteworthy that relatively few honorary degrees have been conferred on physicians. At Fordham University the honorary degree of Litt. D. was conferred on Dr. James J. Walsh of East Pepperell, Mass. At Washington University, the honorary degree of LL. D. was conferred on Dr. Theobald Smith of the Rockefeller Institute for Medical Research, and at Princeton University the honorary degree of LL. D. was conferred on Dr. Leonard Wood, Major-General of the United States Army. Dr. Theobald Smith also received the honorary degree of Sc. D. from Yale; and Dr. Arthur Dean Bevan, of Chicago, the honorary degree of

A.M. At Harvard Commencement President Lowell, in recognition of Dr. Strong's recent services in Serbia, conferred upon him the honorary degree of Sc. D. in the following terms: "Richard Pearson Strong, knight errant of these latter days, armed not like the knights of old, but with the power of science, yet running greater risks than they; destroying dragons invisible to mortal eye, and saving not one or two, but hundreds of thousands by his art."—(Boston Medical and Surgical Journal.)

RADICAL OPERATION FOR CANCER OF THE RECTUM, MAYO CLINIC

As to permanent cures, of the 430 patients on whom a resection was done, 364 recovered from the operation. Eliminating those who were operated on less than three years ago, 33.3 per cent. have lived three years or more, and 28.3 per cent. have lived five years or more after the operation. These percentages may be fairly increased to 37.5 and 35.8 per cent., respectively, by subtracting from the mortality figures the normal death-rates for corresponding ages for periods of three and five years, i. e., 4.2 and 7.5 per cent.—(Transactions American Surgical Association.)

BOOK REVIEWS

DISEASES OF THE EYE

By George E. deSchweinitz, M.D., LL.D.,
Eighth Edition. W. B. Saunders Company,
1916.

This is one of the most comprehensive handbooks of ophthalmological practice that has ever been printed in the English language. There is not only an excellent and comprehensive description of the ordinary ocular diseases, but there is a very brief and plain description of almost every rare condition. Among other things there is a chapter devoted to operations in which all the common operations on the eye and its appendages are exactly described. To the oculist the book is invaluable. For the general practitioner it furnishes a most excellent reference handbook.

L. W. Dean.

THE PRIMARY LUNG FOCUS OF TUBERCULOSIS IN CHILDREN

By Dr. Anthon Ghon, Professor of Pathological Anatomy at the German University in Prague; English Edition. Authorized Translation by D. Barty King, M.A., M.D., M.R.C.P., Assistant Physician to the Royal Hospital for Diseases of the Chest, London. Page 172, With 74 Illustrations. Price \$3.75. Paul B. Hoeber, 69 East 59th St., New York City.

The many American physicians who have had occasion, while taking work in Vienna, to have noticed with what painstaking care, Ghon performs necropsies and makes the subsequent examinations, will

have great confidence in the conclusions reached by him in this work dealing with a most vital subject. This investigation is particularly timely and important in view of the fact that it is now rather generally conceded by students of the disease, that infection with tuberculosis occurs nearly always in childhood. Gohn's conclusions are based on a careful examination and analysis of 184 cases of tuberculosis in children.

Ghon concludes that the lung represents the primary focus of infection in practically all cases. Although the most marked lesion of tuberculosis in children is in the lymph nodes at the hilum of the lungs, careful examination reveals that in practically all of his cases, there is a lesion in the lungs which must be regarded as primary. To be a little more specific, Ghon found that of his 184 cases, the lungs represented the channel of infection in 162 cases, the right tonsil in one case, the small intestine in three cases, and the skin in one case. In the remaining cases it was not possible to determine definitely what the avenue of infection was. Ghon concludes that in at least 90 per cent. of cases of tuberculosis in children, the primary infection occurs in the lungs. This is a conclusion of great practical importance. Ghon also showed that the necropsy findings confirm the accuracy of the tuberculin test with great regularity. Only once was he unable to find any tuberculous lesion in a child who had given a positive reaction.

The work is well translated by King, an Englishman. It is interesting to note the following footnote comment by the translator: "Needless to say, this work was undertaken, and its publication authorized, before the outbreak of the present war."

Ghon's work is an important contribution to the subject of tuberculosis and should be examined by all especially interested in the subject.

H. A.

GYNECOLOGY

By William P. Graves, M.D., F.A.C.S.,
Professor of Gynecology at Harvard Medical School. Octavo Volume of 770 Pages
With 424 Original Illustrations, 66 of Them
in Colors. W. B. Saunders Company, 1916,
Philadelphia and London, Cloth \$7.00 Net.
Half Morocco \$8.50 Net.

This most excellent book is divided into three parts. Part first is the part which distinguishes the work from others of its class in that it "deals with the physiology of the pelvic organs and with the relationship of gynecology to the general organism."

After a chapter on the Physiology of the Uterus and Ovaries comes a rather full discussion of the Relationship of Gynecology to the Glands of Internal Secretion.

Aside from a recent work by Bandler, this important relationship receives but little consideration. Although our knowledge of internal secretions is far from being exact, yet we can reasonably assume that as far as gynecology is concerned, in some of

its features there seems to be no logical way of explaining many of the phenomena except through the agency of the internal secretions. In-as-much as it is known that the internal secretions profoundly influence normal metabolism, it brings us to easily understand the evolution of the organs of generation, the arrival of puberty, the coming of the menopause and the many deviations from the normal functional activities, during a considerable period of a woman's life. If we may assume the controlling influence to be the internal secretions, we logically turn to organotherapy as a means of treatment in certain conditions, especially where vaso-motor disturbances are concerned. Graves states that 80 per cent. of hysterectomy patients troubled with hot flashes, vertigo, etc., may be greatly benefited by the administration of properly prepared ovarian extract.

The author presents a full account of what is known of the influence of other than ovarian extracts in gynecology, and the reader is recommended to this section for suggestive methods of treatment before resorting to perhaps unwise surgical procedures.

Part second begins with a consideration of gynecologic diseases.

First—Infections—Inflammations.

Second—New Growths.

Third—Malpositions.

Fourth—Injuries Incident to Childbirth.

Fifth—Ectopic Pregnancy and Other Special Conditions.

Sixth—General Symptomatology in Gynecology.

Part third is devoted to Operative Gynecology. The merit of this part of the work is the beautiful illustrations and their fidelity to the real operative procedure. The descriptive text is concise and easy to follow. The author frankly states that no attempt is made to present all the operative methods that have been employed in correcting abnormal conditions but has selected such procedures as in his judgment bring the best and safest results. We are convinced that the surgical judgment exercised by the author in this respect is of the highest order and feel quite sure that the operating gynecologist who follows Dr. Graves book as a guide will not be disappointed in the results of his work.

Fertilizing Lawn and Garden Soils. Agricultural Experiment Station, Iowa State College of Agriculture and Mechanic Arts. Agronomy Section, March, 1916, Ames, Iowa.

During December the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Heilkraft Medical Co.:

Dimazon, Dimazon Oil, Dimazon Ointment,
Dimazon Powder.

Hoffmann-LaRoche Chemical Works:

Betain Hydrochloride, Roche.

Beta-Naphthol Benzoate, Roche.

Ergotinine Citrate, Roche.
 Homatropine Hydrochloride, Roche.
 Seiden Peptone, Roche.
 Theobromine and Sodium Acetate, Roche.

Hynson, Westcott and Co.:

Mercury Biniodide Oil Solution in Ampules,
 H. W. and Co.

Knoll and Co.:

Ichthalbin Tablets, 5 grs.
 Triferrin Tablets, 5 grs.

Merck and Co.:

Antithyroidin Moebius Tablets, $\frac{3}{4}$ grs.
 Apiol, Merck.
 Berberine Hydrochloride, Merck.
 Creosote Carbonate, Merck.
 Dionin Tablets, Hypodermic, 1 gr.
 Dionin Tablets, $\frac{1}{4}$ gr.
 Ergotin, Merck.
 Euquinine, Tablets, 2 grs.
 Euquinine Tablets, 5 grs.
 Ferratin Tablets, $\frac{1}{2}$ grs.
 Iodipin Tablets, 3 min.
 Iron Lactate, Merck.
 Liquid Petrolatum, Merck.
 Ouabain, Merck.
 Phenolphthalein, Merck.
 Phloridzin Merck.
 Quinine Tannate, Merck.
 Sodium Phosphate, Monobasic, Merck.
 Sodium Nucleinate, Merck.
 Stypticin Tablets, Hypodermic, $\frac{3}{4}$ gr.
 Stypticin Tablets, Dental, $\frac{3}{4}$ gr.
 Stypticin Tablets, Sugar-Coated, $\frac{3}{4}$ gr.
 Sulphanilic Acid, Merck.
 Theophyllin Sodium Acetate Tablets, .15 Gm.
 Triphenin Tablets, 5 grs.
 Tropacocaine Hydrochloride Tubes, Sterilized,
 1 gr.
 Veronal Sodium Tablets, 5 grs.

H. K. Mulford Co.:

Diphtheria Toxin for Immunity Test (Schick
 Test), Mulford.

Parke, Davis and Co.:

Iodalbin and Mercuriol Tablets.
 Mercuriol Tablets, $\frac{1}{4}$ gr.
 Mercuriol Tablets, $\frac{1}{2}$ gr.
 Mercuriol Tablets, 1 gr.
 Mercuriol Tablets, 2 grs.
 Mercuriol with Potassium Iodide Tablets.

Powers-Weightman-Rosengarten Co.

Calcium Phenolsulphonate, P. W. R.

Swan-Myers Co.:

Swan's Typhoid Bacillus Vaccine (No. 44) (Hos-
 pital Package).
 Swan's Typhoid Bacillus Vaccine (No. 44)
 (Board of Health Package).

Lehn and Fink:

The Council has recognized Lehn and Fink as
 selling agent for Chloralamid, Schering.

NEW AND NON-OFFICIAL REMEDIES

Since publication of New and Non-official Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies:"

Euresol pro Capillis—Euresol (see New and Non-official Remedies, 1915, p. 268) perfumed to render it suitable for scalp lotions. Merck and Co., New York (Jour. A. M. A., Dec. 4, 1915, p. 2009).

Pollen Extract (Pollen Vaccine)—A solution of pollen protein. It is used for the relief or prophylaxis of a common type of hay fever (pollinosis). Before using it the patient's susceptibility and tolerance should be determined. Treatment with pollen extract has seemed to give relief in some cases.

Hay Fever Vaccine, Mulford (Autumnal)—Pollen extract prepared from ragweed. Marketed in packages of four syringes containing, respectively, 0.0025 mg., 0.005 mg., 0.01 mg. and 0.02 mg. of pollen protein. Also in separate syringes containing 0.02 mg. pollen protein. The H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Dec. 4, 1915, p. 2009).

Mercuric Succinimide, Merck—A non-proprietary brand of mercuric succinimide admitted to New and Non-official Remedies. Merck and Co., New York (Jour. A. M. A., Dec. 4, 1915, p. 2009).

Morphine Meconate, Merck—A non-proprietary brand of morphine meconate admitted to New and Non-official Remedies. Merck and Co., New York (Jour. A. M. A., Dec. 4, 1915, p. 2009).

Swan's Staphylococcus Bacterin (No. 37)—Marketed in packages of six 1 Cc. vials and in 20 Cc. vials. Swan-Myers Company, Indianapolis, Ind.

Swan's Streptococcus Bacterin (No. 43)—Marketed in packages of six 1 Cc. vials and in 20 Cc. vials. Swan-Myers Company, Indianapolis, Ind.

Calcium Peroxide, Merck—A non-proprietary brand of calcium peroxide admitted to New and Non-official Remedies. Merck and Company, New York.

Sodium Beroxide, Merck—A non-proprietary brand of sodium peroxide admitted to New and Non-official Remedies. Merck and Company, New York.

Zinc Peroxide, Merck—A non-proprietary brand of zinc peroxide admitted to New and Non-official Remedies. Merck and Company, New York.

Ethyl Salicylate, Merck—A non-proprietary brand of ethyl salicylate admitted to New and Non-official Remedies. Merck and Company, New York.

Osmic Acid, Merck—A non-proprietary brand of osmium tetroxide admitted to New and Non-official Remedies. Merck and Company, New York.

Sodium Oleate, Merck—A non-proprietary brand of sodium oleate admitted to New and Non-official Remedies. Merck and Company, New York.

Thiosinamine, Merck—A non-proprietary brand of thiosinamine admitted to New and Non-official Remedies. Merck and Co., New York.

Urea, Merck—A non-proprietary brand of urea ad-

mitted to New and Non-official Remedies. Merck and Company, New York.

Ampuls Sodium Cacodylate, Mulford, $7\frac{3}{4}$ grains—Each ampule contains sodium cacodylate 0.5 Gm. H. K. Mulford Company, Philadelphia, Pa.

Ampuls Sodium Cacodylate, Mulford, 15 grains—Each ampule contains sodium cacodylate 1 Gm. H. K. Mulford Company, Philadelphia, Pa.

Ampules Solution Pituitary Extract, Mulford, 0.5 Cc—Each ampule contains solution pituitary extract 0.5 Cc. H. K. Mulford Company, Philadelphia, Pa. (Jour. A. M. A., Dec. 11, 1915, p. 2085).

Scarlatina Strepto-Serobacterin, Mulford (Therapeutic), (Sensitized Scarlatinal Streptococcic Vaccine)—Marketed in packages of four syringes. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Dec. 18, 1915, p. 2167).

Quinine Dihydrochloride (Quininæ Dihydrochloridum)—The dihydrochlorid of the alkaloid quinine. Since quinine dihydrochloride is very soluble, its use has been proposed where concentrated solutions of quinine are wanted, as for subcutaneous injections and similar purposes.

Ampules Quinine Dihydrochloride, Mulford, 0.24 Gm.—Each ampule contains 0.24 Gm. quinine dihydrochloride in 1 Cc. of sterile solution. H. K. Mulford Co., Philadelphia, Pa.

Ampules Quinine Dihydrochloride, Mulford, 0.5 Gm.—Each ampule contains 0.5 Gm. quinine dihydrochloride in 1 Cc. of sterile solution. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Dec. 18, 1915, p. 2167).

Purified Tricresol, Mulford—A mixture of isomeric cresols, corresponding closely to Cresol, U. S. P. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Dec. 18, 1915, p. 2167).

Iodosticks (Iodine 60 per cent. and Potassium Iodide 40 per cent.)—Wooden sticks $1\frac{1}{2}$ inches long, tipped with a mixture of iodine 60 per cent. and potassium iodide 40 per cent. Antiseptic Supply Co., New York (Jour. A. M. A., Dec. 18, 1915, p. 2167).

Iodoapplicators and Iodoapplicators, Special (Iodine 60 per cent. and Potassium Iodide 40 per cent.)—Wooden sticks $6\frac{1}{2}$ and 12 inches long, respectively, tipped with a mixture of iodine 60 per cent. and potassium iodide 40 per cent. Antiseptic Supply Co., New York (Jour. A. M. A., Dec. 18, 1915, p. 2167).

G. Strophanthin (Thoms), Merck—A non-proprietary brand of ouabain, crystallized. Merck and Company, New York.

Mercury Biniodide Oil Solution in Ampules, H. W. and Co.—One c.c. of solution contains red mercuric iodide in a neutral fatty oil, 0.1 Gm. ($\frac{1}{10}$ grain). Hynson, Westcott and Co., Baltimore, Md.

Mercuriol Tablets, $\frac{1}{4}$ gr.—Each tablet contains mercuriol 0.016 gm. Parke, Davis and Co., Detroit, Mich.

Mercuriol Tablets, $\frac{1}{2}$ gr.—Each tablet contains mercuriol 0.03 gm. Parke, Davis and Co., Detroit, Mich.

Mercuriol Tablets, 1 gr.—Each tablet contains

mercuriol 0.065 gm. Parke, Davis and Co., Detroit, Mich.

Mercuriol Tablets, 2 grs.—Each tablet contains mercuriol 0.13 gm. Parke, Davis and Co., Detroit, Mich.

Mercuriol with Potassium Iodide Tablets—Each tablet contains mercuriol $\frac{1}{4}$ gr. and potassium iodide 1 gr. Parke, Davis and Co., Detroit, Mich.

Iodalbin and Mercuriol Tablets—Each tablet contains iodalbin 5 grs. and mercuriol 1 gr. Parke, Davis and Co., Detroit, Mich.

Liquid Petrolatum, Merck.—A non-proprietary brand of liquid petrolatum, U. S. P. It is made from American petroleum. It is colorless, non-fluorescent, practically odorless and tasteless. Merck and Co., New York (Jour. A. M. A., Dec. 25, 1915, p. 2239).

PROPAGANDA FOR REFORM

Proprietary Digitalis Preparations—The Council on Pharmacy and Chemistry reports that it is becoming increasingly apparent that the tincture of digitalis produces the full therapeutic effects of digitalis, and that when it is properly made it is as stable as any liquid preparation of digitalis now available; and that the tincture has the systemic side actions of digitalis, including the emetic, in no greater degree than the various proprietary preparations of this drug. Strophanthin and crystallized ouabain are now available in sterile solutions in ampules and afford a convenient means of promptly securing the cardiac action by intramuscular or intravenous injection (Jour. A. M. A., Dec. 4, 1915, p. 2024).

Dr. Pierce's Pleasant Pellets—The A. M. A. Chemical Laboratory reports that the pills responded to tests for emodin and aloin. Essentially, Pierce's Pleasant Purgative Pellets appear to be an ordinary laxative pill. That the active principle of aloes was found in the pills is of interest in view of the fact that the leaflet advertising Pierce's Pleasant Pellets warns the public against the use of purgatives composed of aloes (Jour. A. M. A., Dec. 4, 1915, p. 2025).

Nose-Ions—The A. M. A. Chemical Laboratory reports that the circular mater for "Nose-Ions" is a crude attempt to impose on a scientifically trained profession with pseudo-scientific patter about ions, ionic dissociation and the positive and negative charges of ions. It appears that Nose-Ions is essentially an ointment consisting of a petrolatum base, containing some odorous principles such as camphor, menthol and eucalyptus, with some salicylic acid and some quinine (Jour. A. M. A., Dec. 4, 1915, p. 2026).

Ozomulsion—This "patent medicine" long sold as a consumption "cure" has been declared misbranded under the Food and Drugs Act, the therapeutic claims being both false and fraudulent. The preparation was found to be an emulsion of cod liver oil, with glycerine and phosphorus compounds of calcium

and sodium (Jour. A. M. A., Dec. 18, 1915, p. 2184).

Dr. Whittington's Treatment for Consumption—This preparation was examined in the A. M. A. Chemical Laboratory. From the analysis it appears that Dr. Whittington's Treatment for Consumption is a flavored syrup devoid of potent ingredients other than alcohol. Dr. Whittington is a member of the Medical Society of California (Jour. A. M. A., Dec. 18, 1915, p. 2184).

Rogers' Consumption Cure—Rogers' Consumption Cure and Cough Lozenges and Rogers' Inhalant were advertised for the treatment of diseases of the lungs, etc. The government chemists reported that the first consisted of sugar lozenges, containing a small amount of gum and a trace of oil of rosemary. The inhalant was found to be an alcoholic solution of volatile oil, chiefly rosemary. The government held the therapeutic claims made for these preparations false. The owners having made no defense, they were fined (Jour. A. M. A., Dec. 18, 1915, p. 2185).

Mist. Helonin Comp.—The only available information in regard to the composition of Mist. Helonin Comp., Schlotterbeck and Foss, is a statement in a circular that the active ingredients are helonin, senecin and avenin and the statement on the label that it contains 45 per cent. alcohol. The alcohol content is that of strong whiskey. The practically inert drugs asserted to be contained in it would not in the least interfere with its use as a cordial. On the basis of the information supplied by the manufacturer, Mist. Helonin Comp. may be classified as an objectionable and worthless nostrum—unless we regard the alcohol as of value (Jour. A. M. A., Dec. 18, 1915, p. 2186).

In compatibility of Quinine with Aspirin—Experiments have shown that weak acids, such as acetyl-salicylic acid (aspirin), citric, malic, acetic or tartaric acid under the influence of heat may convert quinine into its poisonous isomer quinotoxin and cinchona into cinchotoxin. The danger of the formation of quinotoxin in the body cannot be great. Ready-made mixtures of quinine or cinchona preparations with weak organic acids should be avoided (Jour. A. M. A., Dec. 18, 1915, p. 2187).

Salvarsan Made in U. S.—Because of the shortage due to the war, salvarsan is made and offered for sale under its chemical name to physicians and hospitals urgently in need of it by the dermatologic laboratories of the Philadelphia Polyclinic. Dr. Jay F. Schamberg, the director of the Department of Dermatological Research, states that the product made by the dermatologic laboratories has been employed on hundreds of cases with excellent therapeutic results and with no reports of accident or untoward complications (Jour. A. M. A., Dec. 18, 1915, p. 2179).

Cu-Co-Ba, Tarrant—From the statements of the circulars, it appears to be one of the copaiba and cubeb preparations which at one time were in vogue as a routine measure in the treatment of gonorrhea. (Jour. A. M. A., Dec. 25, 1915, p. 2257).

Poslam—The A. M. A. Chemical Laboratory in 1909 found that essentially Poslam consisted of zinc oxide 12.01 parts, sulphur, 6.67 parts, corn starch 22.00 parts, tar oil 15.18 parts, menthol and salicylic acid, small quantities, fatty base to make 100 parts. For skin affections which may be benefited by ointments the official ointments are as effective as the proprietary products and have the added advantage of being of known and more uniform composition (Jour. A. M. A., Dec. 25, 1915, p. 2256).

Orthoform—New—Treasury Decision 2194 contemplates registration of orthoform-new under the Harrison Narcotic Law (Jour. A. M. A., Dec. 25, 1915, p. 2257).

COUNCIL ON PHARMACY AND CHEMISTRY

During October the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Mallinckrodt Chemical Works:

Betanaphthyl Salicylate, M. C. W.

Merck and Co.:

Betol.

Bismuth Tribromphenate, Merck.

Butylchloral Hydrate, Merck.

Ethyl Bromide, Merck.

Homatropine Hydrochloride, Merck.

Sodium Cacodylate, Merck.

H. K. Mulford Co.:

Hay Fever Vaccine, Mulford: 4 syringe packages (0.0025 mg., 0.005 mg., 0.01 mg. and 0.02 mg.) and 1 springe packages (0.02 mg.).

Merck and Co.:

The Council has recognized Merck and Co. as selling agent for the products of Knoll and Co. described in New and Non-official Remedies. The Council has also recognized Merck and Co. as selling agent for Kelene.

Heyden Chemical Works:

Betol: Having been advised by the Heyden Chemical Works that Betol is no longer offered for sale the Council voted that it be omitted from New and Non-official Remedies.

THE FORGETFULNESS OF THE SURGEON

The Western Medical Times of Denver has found another mean thing that surgeons are sometimes guilty of. For instance, it is stated that a doctor who has a case to operate on, employs another doctor to give the anesthetic and forgets to pay him although he gets a good fee for the operation and even collects an anesthetic fee from the patient. The "Times" thinks that this kind of forgetfulness is particularly unfortunate and really needs some kind of treatment, the exact nature of which is not pointed out. If we were asked for an opinion, we should advise the cultivation of a sense of fairness and decency, which in time perhaps would become responsive to the rights of the other man.

BREACH OF CONTRACT

In this case a physician was held liable for not attending a woman in confinement when he had previously agreed to do so, for the reason that at the time when the woman was delivered he was employed in attending to another patient. This case is somewhat peculiar, and the decision against the physician was probably made for the reason that apparently he made no effort to send someone to take his place. This whole question of the right of a physician or patient to terminate the unwritten contract which exists between them is pretty well and clearly defined at law. The real basis of it may be said to be a matter of simple courtesy of one to the other. If a physician finds himself in a predicament of this kind, and is notified that a woman whom he has previously agreed to confine is about to be confined, and if he is in attendance upon another patient, he should immediately notify the woman to be confined, or her relatives or friends, and make some effort to see that she is properly cared for. The case cited would apparently come somewhat under the decision of the flood case in this state, where the termination of services was abruptly performed by the physician and without due consideration for the patient.—(California State Journal of Medicine.)

IOWA'S BABY HEALTH CONFERENCE

Since the inauguration of a Baby Health Conference a few years since, under the auspices of the Iowa State Fair and Exposition, much good has undoubtedly been accomplished in disseminating knowledge pertinent to the welfare of babies and children throughout the state.

As has been known for a long period of time, Iowa's stock has been better cared for, other things being equal, than even the babies of the state. The manufacture of hog cholera serum; the stamping out of the mouth and hoof disease among cattle; the inspection of dairy herds for bovine tuberculosis; the scientific preparation of food ingredients for stock feeding; and lastly, but by no means least, the applied eugenics of animal husbandry, are facts and not conditions that have long been household knowledge throughout this great commonwealth.

No clearer demonstration between methods used for stock betterment and baby betterment has recently been depicted than that portrayed by "Ding" in a cartoon appearing in a recent issue of the Register and Leader. Here the care with which stock is favored, the preparation of various foodstuffs, and the kindness exercised towards the dumb animal stands out in strong contrast to the manner in which the "red hot" sandwiches and other food materials are prepared in unhygienic and unsanitary surroundings to find at last a resting place in the internal workings of some commonplace, ordinary human animal.

As has been ably said, the first duty of any state is for the betterment of her citizens, and to this end

the institution of the various Baby Health Conferences over the state has a distinct mission to perform. The object of these various Conferences is to reduce infant mortality; to improve babies and the race through them; to educate the public interest in child welfare; to give practical help in caring for babies; and to establish a closer relation between parents and doctors in the field of preventive medicine.

Held under the auspices of the State Fair and Exposition, the recent contest in Iowa means more than learning which baby in the state has the most perfect physical and mental development. It stands as an exponent to induce better health in all Iowa babies, and as a means of determining where the healthiest babies are to be found, whether in rural or urban districts. Iowa is to be congratulated for having erected a Women and Children's Building where those things which tend to the betterment of child welfare are yearly topics open for consideration and discussion by an intelligent public.

COMING MEETINGS

A birthday party of the Confederation of County Medical Societies of northern Illinois and southern Wisconsin associated with eastern Iowa, is to be held at Freeport, Illinois, September 26 and 27. A very able program has been prepared by the committee, Drs. A. J. Markley, A. C. Helm, and W. E. Park. Iowa is to be represented by Dr. J. F. Herrick, Ottumwa, by Drs. A. M. Pond, H. B. Gratiot and J. C. Hancock, Dubuque, and by Drs. J. E. O'Keefe and W. E. Patterson of Waterloo.

MEDICAL SOCIETY OF MISSOURI VALLEY

The Medical Society of the Missouri Valley will hold its annual meeting in Omaha, under the presidency of Dr. John P. Lord, on Thursday and Friday, September 21 and 22. A cordial invitation is extended to the profession of nearby states. The Omaha-Douglas County Medical Society will entertain with a smoker; the Commercial Club will give a luncheon, while the ladies will have an auto ride and a theatre party.

The scientific program will be an exceptionally entertaining one. Dr. Jabez N. Jackson, of Kansas City, will deliver the Address in Surgery, while Dr. Walter L. Bierring of Des Moines, will give the Address in Medicine. Dr. Robert H. Babcock of Chicago, will discuss Bronchial Asthma; Dr. R. T. Vaughn of Chicago, will give an illustrated lecture on Multiple Cartilaginous Exostoses; Dr. Fred Moore, Supervisor of Health in the Des Moines public schools, will present a paper on Acidosis in Children.

Following is the preliminary program:

"First Aid to the Injured"—C. W. Hopkins, Chicago, Illinois.

"Spinal Puncture in Diabetes Insipidus"—E. A. Graham, Mason City, Iowa.

"Blood-Picture After Experimental Splenectomy"—T. G. Orr, Kansas City, Missouri.

"Infections of the Nervous System in Infancy and Childhood"—G. W. Robinson, Kansas City, Missouri.

"The Attitude of the Public to the Profession"—Granville Ryan, Des Moines, Iowa.

"The Conservative and Radical Treatment of Fractures of the Femoral Neck"—W. E. Olcott, Council Bluffs, Iowa.

"A Few Words on the Treatment of Cystocele"—J. F. Herrick, Ottumwa, Iowa.

"Diagnosis of Stomach Diseases"—J. W. Shuman, Sioux City, Iowa.

"The Bone Graft Versus The Plate"—Hugh Charles, Atchison, Kansas.

"Bronchiectasis in Children"—C. R. Spicer, Hastings, Nebraska.

"Umbilical Hernia"—W. T. Elam, St. Joseph, Missouri.

"The Treatment of Squint"—P. I. Leonard, St. Joseph, Missouri.

"Clinical Limitation in the Use of Abdominal Supports"—J. M. Bell, St. Joseph, Missouri.

"The Value of the Polymorphonuclear Leucocyte in Surgical Diagnosis"—C. H. Newell, Omaha, Nebraska.

"Transient 'Blind Spells' and Their Significance"—J. M. Patton, Omaha, Nebraska.

"Embryonal Tumors of the Jaw"—Michael G. Wohl, Omaha, Nebraska.

"Perforated Gastric and Duodenal Ulcer"—L. A. Dermody, Omaha, Nebraska.

"A Review of the Human Colon"—E. L. DeLaney, Omaha, Nebraska.

"Congenital Dislocations"—Frank D. Dickson, Kansas City, Missouri.

"A Case of Amputation Pain Stump"—S. Grover Burnett, Kansas City, Missouri.

"Etiology, Diagnosis and Treatment of Diabetes Mellitus"—F. M. Crain, Redfield, South Dakota.

"Multiple Cartilaginous Exostoses" (Lantern Slides)—R. T. Vaughn, Chicago, Illinois.

The meeting will be held in the ball room of Hotel Fontenelle, and this house will also be headquarters.

Clinics will be held in the various hospitals of Omaha, on Saturday, for the benefit of visiting physicians.

SOCIETY PROCEEDINGS

The Appanoose County Medical Society held their August meeting the 30th at Centerville. The following was the program:

Preparation of Patient for Office Examination—Dr. C. T. Slavin.

Case Histories; Method of Taking, Filing, etc.—Dr. C. P. Bowen.

Tonsillitis and Its Complications—Dr. C. P. Tillmont.

Method of Making Analysis of Stomach Contents, Urine, Feces and Sputum—Dr. B. F. Sturdivant.

The August meeting of the Calhoun County Medical Society was held at Rockwell City the 24th. Interesting papers were read by Dr. J. W. Craig, of Lohrville, and Dr. D. W. McCrary, of Lake City.

A meeting of the Carroll County Medical Society was held at the City Hall, Carroll, August 17th; the program was:

Circumflex Nerve Paralysis—A. M. Evetz, Carroll.

Care of the Infant During the First Week—C. E. Wolf, Coon Rapids.

Hay Fever—W. E. Hart, Lanesboro.

The Dallas-Guthrie County Medical Society held their annual picnic at Dexfield Park, August 8.

"Doctors' Day at Manchester"—The Delaware County Medical Society met in adjourned session at the Carnegie Library Auditorium, August 8 at 1:30 P. M. The meeting was scientific and social in character. Members of the society with physicians from adjoining counties to the number of fifty or more accompanied by their wives and daughters were present. The scientific program consisted of papers read by Dr. W. L. Bierring, of Des Moines, "The Significance of the Different Phases of Blood-Pressure," Dr. E. A. Schrader, of Independence, "Dental Foci of Infection—Their Cause and Prevention," and by Dr. E. Frank Chase, of the Mayo Clinic, Rochester on "General Consideration of the Tonsils."

During the scientific program, the wives of the local physicians entertained the visiting ladies at the Armory, and later with a motorboat ride on the Maquoketa river. A special program at the Plaza theater completed the afternoon's entertainment. A banquet was enjoyed by all at 5:45 P. M. and was followed by an auto ride to the U. S. Fish Hatchery. Much of the success of the meeting was due to the efforts of the committee—Drs. L. J. Bowman, E. J. Wintenberg and J. J. Lindsay.

The Jackson County Medical Society held their mid-summer meeting at Bellevue at the home of Dr. M. W. Moulton, August 3rd. Dr. N. G. Alcock of the State University gave a paper on Some Typical Cases of Kidney and Bladder Stones, Dr. D. N. Loose, of Maquoketa, read a paper on Sunstroke.

The Plymouth County Medical Society met at Akron August 1st. Dr. C. G. Ellsworth, of Brunswick, read a paper on Infantile Paralysis. The subject of the paper by Dr. Fred G. Vernon, of Merrill, was, A Plea to the Profession to discard the Term Rheumatism.

The Pocahontas County Medical Society met August 22nd at Rolfe with Dr. E. W. Wilson. Papers were read by Drs. S. J. Townsend, W. W. Beam and E. G. Kepler. The September meeting will be held at Fonda.

The Keokuk Physicians' Club entertained about three hundred physicians from Hancock county, Ill., Clark county, Mo., and Lee county, Ia., at a luncheon held at the Keokuk Country Club, August 8th. The scientific program consisted of papers read by Dr. N. M. Percy, Chicago, and Drs. M. P. Ravenel and Woodson Moss of Columbia, Mo. Following the program, a social time was indulged in by the local physicians and their guests.

BOTNA VALLEY MEDICAL SOCIETY

The annual meeting of the Botna Valley Medical Society was held at Atlantic, August 24th. The meeting was called to order in the Commercial Club rooms at 1:00 P. M. by President U. S. Mullens. Owing to the prevailing good weather, a large number of physicians were in attendance. The program consisting of twelve numbers was an unusually strong one, and the fact that every member, scheduled to read a paper or present a case, was present is sufficient testimony as to the interest and enthusiasm shown by this society.

Dr. A. Carson, Des Moines, read a paper on Simplicity and Efficiency in Drug Prescribing. The doctor emphasized the worthlessness of many drugs now in use, and insisted upon a more intelligent usage of some of our therapeutic agents. The fact that Nature cured and not the doctor was very aptly brought out, while a parting plea to make one's patients comfortable, summarized the concluding remarks.

Dr. Tom B. Throckmorton, Des Moines, presented the subject, Conjugal Tabes Dorsalis. A consideration of syphilis especially in the light of our more recent knowledge as to its prevalence, modes of transmissibility and its selective action on the central nervous system in some individuals, together with a report of a case of the conjugal type, served as the basis of the doctor's paper.

Dr. W. E. Wolcott, Council Bluffs, presented a highly practicable paper on Indications for Bone Grafts in Fracture of the Femur. Selected case reports in which the Albee method of bone grafting was used, were interspersed throughout the paper, while skiagrams illustrative of the subject proper helped to further elucidate the points brought out in the presentation of the paper.

Dr. C. L. Campbell, of Atlantic, read a paper on Arterial Sclerosis. Although a subject of every day knowledge, the essayist clearly demonstrated by the thorough manner with which he handled his material that there was much yet to be learned as to

the underlying pathology of this condition. The importance of right living as a preventive means and the role that toxic substances play as causal factors, were clearly and distinctly emphasized.

Dr. M. G. Wohl, Omaha, presented an interesting paper on Granuloma Pyogenicum. Although a subject somewhat rarely referred to in medical literature, yet the essayist insisted the condition was one of rather common occurrence. A review of the literature and a report of a case served as the basis of the doctor's paper, while lantern slides of typical cases further impressed the audience with the characteristics of this condition.

Dr. James M. Patton, Omaha, in his characteristic manner, presented one of the most practical papers read before the society. The topic, Ocular Prophylaxis, was presented in such a clear, concise way that no one present could help but be benefitted by the timely suggestions and admonitions of the author.

Dr. C. B. Burck, Atlantic, in the presentation of The Status of Serologic and Cutaneous Tests in Syphilis, very ably reviewed the chemic and biologic features which enter into a consideration of this subject, and summarized his experience in the use of these most valuable laboratory tests.

Dr. I. F. Crosby, Stuart, entertained the society with the presentation of the case histories of three patients whom he had treated for abdominal trouble. The difficulties sometimes encountered in diagnosing gall tract lesions and diseases of the stomach was touched upon.

Dr. A. C. Stokes, Omaha, read a report of fifty-two cases of Seminal Vesiculitis. Although the subject is one with which the medical profession is but slightly familiar yet the interest with which the society received the essayist's report, clearly demonstrated the receptive mood of the audience and its willingness to learn more about some of the more accepted methods of treating a heretofore stubborn and rather intractable condition.

Dr. C. H. Waters, Omaha, in his presentation of Blood Transfusion, while ably demonstrating the simplicity of technique, yet without fear or favor, voiced his beliefs concerning the indications for and against the use of this valuable therapeutic agent.

Owing to the lateness of the hour the paper on Extraneous Pelvic Conditions Producing Bladder Symptoms, by Dr. Max Emmert of Omaha and a Case Report on Diseases of the Pituitary Body, by Dr. U. S. Mullens, of Atlantic, were deferred.

The following officers were elected for the ensuing year: President, G. A. Spaulding, Avoca; vice-president, I. F. Crosby, Stuart; secretary-treasurer, A. Weaver, Cumberland.

The importance of county and district medical societies to the state medical organization cannot be over estimated, and southwestern Iowa is to be congratulated on having the Botna Valley Medical Society as one of the states chief tributaries.

IOWA AND ILLINOIS CENTRAL DISTRICT MEDICAL SOCIETY

On the afternoon of Tuesday, August 15th, at Watch Tower, Rock Island, the Iowa and Illinois Central District Medical Society celebrated its fiftieth anniversary. The occasion was one for which the society feels justified in taking pride beyond the ordinary, especially so upon being reminded by president, Dr. Fairchild, that hardly more than seventy-five years have passed since the first doctor began his work within this jurisdiction. Dr. Fairchild in his inaugural and introductory address, linked the history of medicine in Iowa and Illinois with the history of the society and with its possibilities for the future.

It was a celebration beyond the usual, both socially and intellectually. Plates at the six o'clock dinner were placed for one hundred and twenty-five doctors and their ladies, but this number was exceeded at the afternoon session by a larger number of physicians and nurses who came for the scientific session and were unable to remain for the social event. Unfortunately, the society was unable to preserve in full the transactions of this meeting, which was participated in by some of the best brains of the country. A lesson in humility by Dr. Isaac A. Abt made concrete example of Dr. Fairchild's hope that "pride for the past be kept second to hope for the future," for it is in August of 1916 that Dr. Abt delivers to us a lecture on the subject of acute poliomyelitis, about which we hear so much, yet know so little. His talk was impossible of abstract, nothing short of the full paper could be representative, taking the acute paralysis of infants from its importation into this country in the year 1880 and tracing its spread from occasional sporadic and small epidemic foci to its present extensive epidemic and pandemic position through a term of the very years in which we are pleased to claim that the medical profession has conquered and made steps toward the elimination of acute contagion. It is well to be reminded that we must face this aspect squarely. Dr. Abt's recommendations for treatment and for prophylaxis embody all that is known today in medicine.

With the Mayo party on river excursion was Dr. Rountree, head of the medical department of the University of Minnesota, who in the enforced absence of Dr. Braasch favored the society with a discussion of Uremia. Dr. Rountree is the originator of the pthalein test for determining renal function. His discussion of the theories concerning the production of uremic poisoning was lucid, authoritative, and compelled attention. He emphasized the clinical importance of the recognition of a pre-uremic stage and the good efficiency of treatment at this time. Recognition is made by test of kidney function.

Dr. Wm. J. Mayo needed no introduction to this audience. Later in the day he was characterized by Mr. Bowman as the foremost medical man of America, a statement which struck a popular chord. Dr. Mayo treats stones in the kidney as an essential

surgical matter. He gains entrance through a right angle incision of large dimension, enters the kidney preferably through its pelvis, and explores with the finger inside rather than by external palpation of the organ. He laid stress upon the importance of separate drainage for each pocket and likes to cover his incision with the external fat as an insurance against leakage. Kidneys of low function he removes *in toto* when mated by a sound kidney.

But one after dinner speaker was heard: Mr. John G. Bowman, formerly president of the Iowa State University, addressed us as a representative of the American College of Surgeons. It will be remembered that Mr. Bowman is a man of clean purpose and that his views concerning some ethical evils of the profession are not at all secret. Specifically, Mr. Bowman referred to the splitting of fees as the foundation stone of unethical surgery and opined that it was an evil capable of correction in the immediate future. His work on behalf of the College of Surgeons is encouraging.

The next regular meeting of the society will occur in October. W. D. Chapman.

DO YOU KNOW THAT

Pneumonia kills over 120,000 Americans each year?

Rural sanitation is a health protection to the city-dweller?

It's foolish to educate a boy and then let him die of typhoid fever?

Exercise in the garden is better than exercise in the gymnasium?

Rats are the most expensive animals which man maintains?

Scarlet fever kills over 10,000 Americans each year?

A high bred dog has a right to have his birth registered—so has a baby?

It's the baby that lives that counts?

In the lexicon of health there is no such word as "neutrality" against disease?

The death rate of persons under forty-five is decreasing; of those over forty-five it is increasing?

Walking is the best exercise—and the cheapest?

A little cough is frequently the warning signal of tuberculosis?

Bad teeth and bad tonsils may be the cause of rheumatism?

The air-tight dwelling leads but to the grave?

—U. S. Public Health Service.

MARRIAGES

Dr. Ira N. Crow to Miss Ermabeth Brown, both of Marengo at Des Moines, August 30th.

Dr. Arthur W. Erskine, of Cedar Rapids, to Miss Betsy Erskine, of Youngstown, Ohio, at Buffalo, N. Y., August 24th.

Dr. Chas. H. Bartruff, of Reinbeck, to Miss Nellie Smead, of Gladbrook.

BIRTHS

Dr. and Mrs. Charles Palen, of Dubuque, August 13th, a daughter.

Dr. and Mrs. W. P. Slattery, of Dubuque, August 12th, a son.

Dr. and Mrs. Garner Parker, of Pocahontas, August 7th, a son.

Dr. J. T. McConnaughey, of Winfield, a son.

DEATHS

John W. Carver, M.D., age thirty-six; Keokuk Medical College, College of Physicians and Surgeons 1906; member of Madison County and Iowa State Medical Societies; died suddenly at his home in East Peru, August 7th.

John Bain, M.D., age seventy-three; State University of Iowa College of Medicine; hospital steward during the Civil War; a practicing physician for many years at Brandon; died at his home in that place, July 28th.

William D. Christy, M.D., age sixty-nine; Starling Medical College, 1878; a practicing physician for many years at Afton, later at Shannon City, Creston and Diagonal; after an illness of ten years as a result of a cerebral hemorrhage, died at his home in Diagonal, August 2nd.

CHANGES OF LOCATION

Dr. F. H. Fillenworth, of Ossian, has purchased the practice of Dr. D. C. Steelsmith, of Melvin.

Dr. A. W. Chamberlain, of Stratford, has removed to Webster City.

MEDICAL NEWS

Dr. Horace M. Stanley, of Creston, has established a clinical laboratory at that place.

Dr. Daniel Franklin, of Audubon, leaves this

month for a two years special course at the Medical School of Harvard University.

Dr. P. A. Bendixen, of Davenport, has been commissioned by President Wilson a first lieutenant of the medical reserve corps of the United States.

Dr. E. A. Ainsworth, after a practice of his profession for about forty-two years most of this time at West Union, has retired from active practice.

Dr. R. G. Davis, of Indianola, passed assistant surgeon of the U. S. Navy has been sent to the Puget Sound Naval Hospital at Bremmerton, Washington.

Dr. E. B. Winnett, of Des Moines, has returned from Boston, where he took a post graduate course under Dr. Richard C. Cabot, of the Massachusetts General Hospital.

Dr. A. L. Brooks, of Audubon, has been appointed a delegate, by Governor Clark, to the Mississippi Valley Conference on Tuberculosis to be held at Louisville, Ky., October 4, 5, and 6.

Dr. Martha Welpton, of Des Moines, who has been taking special work in Chicago will remove to Chicago where she will be assistant surgeon to Dr. Bertha Van Hoosen at Mary Thompson Hospital.

HOSPITAL NOTES

The contract for the construction of the John McDonald Hospital at Marengo was let recently to A. H. Neumann of Des Moines for \$51,871. The heating and plumbing contract was let to the Cross Hardware Co. of Monticello for \$10,590. The erection of this hospital was made possible by a bequest by the late John McDonald. According to the terms of the will, free medical and surgical treatment is to be rendered the poor of Jones county irrespective of their race, nationality or creed.

SCIENCE VS. CHRISTIAN SCIENCE

A very telling article appeared in Puck, issue of April 15th, comparing the investment of time and money necessary to qualify for the practice of medicine and of Christian Science. It is conservatively estimated that the average medical graduate has given from four to seven years of his time, representing at least \$3,000; living expenses during course, \$3,000; books, instruments, laboratory charges, etc., \$1,000; hospital internship expenses, \$1,000; or \$8,000 as the cost of his preparation for care of the sick. The Christian Science "healer" buys a copy of Mother Eddy's "Science and Health," at \$3.00, and a Prince Albert suit at \$35.00; \$38.00 in all, prepares him to pray over poor fools for pay. Why be a hard-working doctor?

The Journal of the Iowa State Medical Society

Vol. VI

DES MOINES, IOWA, OCTOBER 15, 1916

No. 10

THE ATTITUDE OF THE PUBLIC TO THE DOCTOR

GRANVILLE N. RYAN, M.D., Des Moines
Address Chairman Section on Medicine

In casting over the state for the chairmanship of the various sections by our excellent President, the choice for the medical section, to my great surprise, fell to me. To say that I was delighted is mildly expressing it. If I have merited such choice, I am most happy, for I deem it a great honor as well as a rare privilege to aid in selecting the essayists and helping to arrange the program for one of the best state societies in this country.

The selection of the essayists were made without fear or favor. It is the earnest desire of your chairman that each of you enter into the discussions of the various papers read, and carry away with you enough real enthusiasm to recharge your batteries to the point of carrying you on high speed for at least the next year; and that you will not have cause to change the gear until you have made the last hill leading to the "City of Certainties" for our next annual meeting, where, I can assure you, you will all receive as hearty welcome, if that be possible, as you have received here today in this your "City Beautiful."

This annual gathering of the representative men from the different parts of the state is a most excellent custom. In deciding upon a subject for my contribution to the day's program, the importance of the attitude of the public to the medical profession impressed me as most opportune at this time. In the course of our deliberations let us endeavor to dispel the frosty atmosphere of jealousy and hatred which robs us of the very best compensation in our activities in life, and open wide the doors of good fellowship, pleasant association and friendly criticism and consider not alone the excellent papers to be presented and discussed but also the real interest and concern we have in the public and its welfare. We are their medical councilors and receive our compensation, be it great or small, from our people.

The amount of this compensation depends upon the individual effort put forth for the patient.

Dr. J. B. Murphy in his memorable Presidential Address before the A. M. A. in 1911 at Los Angeles, said "Society can't afford to support its physicians indecently. It demands of them a certain standard of living, but does not pay them legitimately enough to maintain this standard." The results are manifold, but they all amount to the same thing. We should say to legislative bodies that the excessive cost of poor medical service in invalidism, and the high mortality attendant upon inadequacy, falls upon the community, and for it the community is largely to blame for the reason that its legislators have almost universally failed to enact sufficiently strict laws controlling the practice of medicine.

If we are their medical councilors, why are we not their representatives in a more active manner in the framing of measures that pertain to public health and physical welfare? Why are we turned aside when we ask for an appropriation for research work and to carry on our efforts in preventive medicine, and in fact anything that comes before our legislative bodies? Why this cry of graft when we go to the legislative halls and ask for a law that will establish one standard for all who would engage in the art and science of healing the sick, with the distinct understanding that this privilege be granted with favors to none and justice to all? The quack and the charlatan have been permitted to fleece the weak and the innocent through the influence of misguided confidence. The public is calling for efficiency and the best possible results. If they are expecting, and in fact demanding these results, how can they be accomplished without co-operation, and in fact a better understanding and unity of purpose of the laity and the profession. We must all admit that it is due to lack of education of the public.

It is our duty to inform the public what real progress has been made on all sides, and especially in preventive medicine, and that our efforts in the past, present and future, is for the

good of the community, and not for the advancement of any clique, cult, or clan; that the great leaders in our several laboratories are all laboring with one end in view, and that is for the betterment of the human race; that our efforts cannot be influenced by gold nor glamour, that each individual stands alone on his honor to aid in the relentless warfare waged upon ignorance and disease, and that society cannot afford to underestimate the value of the family physician.

The profession as well as the public is indebted to the National Admen's Club for the stand taken on clean advertising at their last annual meeting. They established an expense fund to oust the quack and the charlatan from the pages of the daily press, and to make it cleaner and more dependable. This is surely a most significant step in the right direction. Many of the leading daily papers and representative periodicals have taken the same stand, so we see the evidence of the effects of this propaganda on all sides of us, and we should ask ourselves what have we done in an active manner to aid this movement?

While we have given it our moral support in a weak way, the doctor who has taken the bits in his teeth as a leader in the movement is a rare exception. Should we allow this education on health topics to drift and be guided altogether by philanthropists, certain cults, sects, or opathists? No! A well organized, carefully directed campaign must be instituted, and well prepared physicians in each locality chosen to carry the message of the real meaning of preventive medicine to all classes of society.

What a striking example we see and wonderful results already obtained through the propaganda of educating the public on that dreaded disease—cancer, which was fostered by that eminent surgeon, Dr. John C. Bloodgood of Johns Hopkins. His slogan was to cure the cancer before it became a cancer, to intercept the condition in the pre-cancerous stage if we would attain the best results. This necessitated the co-operation of the layman by educating him to present himself at the earliest possible moment for diagnosis and treatment. We are beginning to see the result of this well directed campaign in our daily clinics.

Reflect for a moment upon the success of the educational campaign of the anti-tuberculosis societies, the significance of pure milk in the community and how it has lowered the infant mortality; and the infant welfare movement which is being so successfully launched. Is it not fully as important to carry this campaign still further and emphasize to the laity the great necessity, based upon the findings of Rosenow and other

laboratory workers, of caring for the teeth, tonsils, adenoids, respiratory, gastro-intestinal and genito-urinary tracks,—in fact all allied conditions that may and do develop from focal infections, and how they can be prevented? All these and numerous other phases of this broad subject should be discussed time and time again. This campaign can, and should be successfully carried out, even at the cross-roads, school house, or in the back woods, provided we engage ourselves in an unselfish, earnest, well organized manner, to bring about a better understanding between the laity and the medical profession.

THE PATHOLOGY OF BACTERIAL INFECTIONS*

J. R. ALLEN, M.D., Waterloo

A philosopher once said, "That what the world needs is not so much to be informed, as to be reminded." I have no new principles or facts to present, nor no new methods of applying old and well known procedures. Life is a continuous adjustment of the individual to its environment, and with the human life it can truly be said that it is enemies smallest in size that are the greatest in their accomplishment. Nothing contributes so much to minimize man's efforts, to increase his bodily suffering, and to finally end his existence as bacteria.

From the time of, and probably before the beginning of a separate existence, our body surfaces and circulatory fluids are infected with bacteria, living as parasites in the lymph stream, which provide food for the cells that carry on our vital functions; many varieties have shown that they are ready to contend to the limit for the right to survive and propagate their kind at any cost. This is a momentous battle and the outgrowth of an enmity ages old, both sides of which are fighting with weapons, inherent and acquired, with no quarter given to the end.

In the almost fifty years of collaboration between the clinical observer and the laboratory expert in bacteriology, definite principles have been discovered, the application of which have increased the sum total of human life a period estimated at from twelve to twenty years. Besides, there must be considered the mitigation of unmeasured ages of pain and anguish. And let it be said to the credit of the profession and for absolute fairness to facts, that the greatest gain has come from measures instituted to prevent the spread of infection, rather than from the ad-

*Read before the Sixty-Fifth Annual Session of the Iowa State Medical Society, Davenport, May 10, 11, 12, 1916.

vances in the methods of treatment, wonderful though they have been. Such a record reveals to us a great opportunity, yes, a deep obligation to further this work by more direct hygienic education of the laity in their personal and civil relations to infection. And in the measures taken for their education, let us not forget that the lay mind is steeped in superstition and ignorance, and that it is to be expected that they question our motives in any advances we may make toward them, having in mind their enlightenment.

It is not difficult to understand that when bacteria enter the body fluids, that the body should resent the invasion, and put forth all the means at its command to destroy the bacteria, and it is not surprising that in this battle some tissues should be destroyed and foreign substance generated which the body would have to dispose of before repair can take place. All these steps covering the time from entrance of the bacteria, during the course of the battle, until the tissues are repaired and functions restored, not as we so frequently think the end results only, are termed pathology. To understand, then, the pathology of bacterial infection, we must know the mode of entrance, the kind of bacteria, together with their strength or virulence, and also their habitat or selective affinity for definite tissues. Also we must take into account the resisting forces of the body. These cover all means by which the distribution of the bacteria is prevented, as well as those measures which destroy and eliminate the bacteria, together with the ability to repair the damage done.

It is not uncommon to hear the thought expressed or implied that bacteria may enter the blood-vessels from the lymph spaces at will. As a matter of fact the existence of a positive pressure within the blood-vessels renders this a physical impossibility. How then, do bacteria invade the blood stream? To answer briefly, indirectly, through the lymph vessels, entering the blood stream in the thoracic region. Primarily, then, once bacteria have passed the natural barriers of skin and mucous membrane, they are in the lymph vessels, where they live and multiply in the lymph as a nutritive culture media. The same as any living organism they digest their food by the action of enzymes which act primarily upon the serum present, but may attack adjacent cell structures. Now, every body cell possesses within itself defensive properties, both physical and chemical. The cell wall acts as a barrier, and the cell protoplasm also contains zymotic properties, but best of all the cell is a member of a complex community of individuals, and it has the ability through the stimulation of

the nerve endings with which it is in contact to send out for help from the body politic or general human system. There is an immediate response through the blood stream. More blood than usual is rushed to the part and with the increased quantity is an increased number of leucocytes, or so-called policemen or soldiers of the blood. Also, sooner or later there is present in the lymph itself new ferments from the blood stream generated for the sole purpose of assisting in this battle. The leucocytes are busily engaged in engulfing and digesting bacteria and are liberating substances which tend to inhibit the action of bacterial ferments. And besides this they are building a surrounding many layered wall, closing off the field of infection, which if truly impenetrable, localizes the trouble, and make it possible sooner or later to clear up and repair the damage done.

But unfortunately, some of the enemy usually escape. Following the fundamental and basic law of invasion by bacteria, they spread the infection away from and not towards the tissues of organs infected. All along the course of the lymph spaces the leucocytes endeavor to surround them, battling at every step to prevent their entrance into the blood stream. These aggregations of leucocytes are commonly called lymph glands. They are neither lymph nor glands, and a better term must be invented to cover this pathology. Some have tried lymph nodes, but it seems that a term more descriptive of their structure or function, either or both could be applied.

It may not be out of the way to note here the passing of the time honored dissection for the removal of the lymph glands of the neck. There may be indications for the removal of the glands of the neck, but shame be upon any man who in the light of present knowledge does not first search for and remove the foci of infection responsible for the condition, for when the phagocytic elements so ruthlessly destroyed, no longer stop the progress of the infection, it readily reaches its tissues of selection and we observe with much wisdom, more assumed than real, that there must have been a lung lesion present, when in fact we have contributed to its production. This is just as applicable to the lymph areas infected by bacteria of any kind in any part of the body.

We will repeat then, that surgical intervention to be of any avail in the treatment of acute infections must have for its purpose the removal of a focus which has shown by its activities that the bacteria coming from it may enter the blood stream. It might be well to add that in the sim-

pler infections with no great tendency to spread, that the production of an open wound with a suitable absorptive dressing, a reversal of the lymph current permits the pouring out of a free and enzyme bearing serum beneficial aside from its mechanical effect.

Continuing our original course, you will observe what happens if, in spite of persistent resistance on the part of the leucocytes and enzymes of the lymph fluid, bacteria enter the blood stream. Following physiologic law, the blood as a living tissue will endeavor to destroy or eliminate the bacterium, both as a foreign substance and with any acquired resistance to the germ it may possess, but in the meantime the bacteria are coursing through the blood stream and some authorities even believe that they are carrying on their life processes, increasing in numbers and virulence. Be that as it may, it has been shown beyond a doubt that because of their size, bacteria escape through the walls of the capillaries into the tissues of any and every organ in the body; then we have super-imposed upon the effect of the bacterial action a disturbance of metabolic function and vastly increased possibility of distribution. Some organs and some tissues are unfavorable to their growth, and on the other hand bacteria are known to have special affinities for certain organs and tissues. It is these variabilities which make the naming of diseases after either the organs involved or the bacteria present ridiculous from a scientific standpoint. For example, pneumonia is said to be a disease of the lungs, when as a matter of fact the fatal pathology is the action of the bacteria or its enzymes upon the heart muscles or in its relocalization in the meninges, or in some other vital point, rather than what takes place within the lung itself. Further it can be said that as a rule the dangerous part of infection lies not so much in the destruction of what the bacteria are able to utilize as food, as in the action of the ferments or toxins liberated which may be carried by the blood to any favorable or selected point, and exert the same harmful action as if the bacteria themselves were present and actively generating toxins. It has become a pretty well established fact that the battle between bacteria and tissue is a battle of enzyme against enzyme, and there is some grounds for the belief that frequently the substances produced by the body itself to overcome the bacteria and their enzymes over-reaches its marks and is turned upon the body tissues to the detriment of the organism that they were designed to protect.

Acknowledging then, that we know very little about what really occurs in the body during an

infection, yet we do know that the re-action developed produces the curative agent. Whatever its nature, it is specific for infections of that kind. The principles underlying the above must be determined since their study is world wide, and sooner or later the science of immunology will yield to us its secrets.

To revert to the part of the subject designed to benefit the general practitioner, let it be remembered that pathology covers the curative efforts of the body as well as the effect of the destructive ability of bacteria; also the extent of the damage done by bacteria is more or less modified by the area of the distribution of their activities. Therefore, it is our duty to assist the body in its efforts to overcome infection by increasing the blood supply and leucocytes, by the removal of bacteria foci *intoto*, and by the reversal of the lymph stream by free drainage wherever possible.

Things that should no longer be tolerated in the light of our present day knowledge of pathology are best illustrated by the failure of anyone pretending knowledge of surgery to open an abscess containing pus under pressure, or perhaps more reprehensible still and certainly fraught with far more dangerous effect is the careless administration of purgatives in the presence of a suspected inflammation of the appendix. Or worse the curretment of infected area like the uterus in puerperal infection and chronic tubercular foci anywhere.

There are many problems that become simple when a careful systematic survey of present local and possible later general pathology are considered.

It is axiomatic that the body has an inherent tendency to retain and regain its normal functions, *i. e.*, there is no therapy but autotherapy. It follows then, that he is the best physician who paraphrasing David Harum: "Does unto the body what nature would do but does it first." Does it as a man of genius, a man of imagination, ever watchful for something new. No two cases are enough alike as to require exactly the same assistance—always weighing, deciding, studying in an earnest endeavor to secure an advantage, be it small or great. The practice of medicine may never become a science, but the nearer it keeps to rational procedure based upon assured facts, the nearer it will approach the ideal.

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Discussion

C. A. Boice, Washington—Just a word to call attention to the more important phases connected with the subject of bacterial infection.

I cannot help but think, as I attend the various meetings, that the border line between medicine and surgery is passing away. It is getting so we can not say, this case is strictly medical and the other strictly surgical, because there isn't any border line. These are medical equations. We must recognize that in a great many cases the pathology which these bacteria will develop depends to a great extent on the point of entrance. The power of the streptococcus viridens has been called to our attention forcibly in the last few years by certain investigators. We find that the streptococcus is able to accommodate itself to certain tissues and to develop in them certain diseases and pathological processes which up to a few years ago we had not considered. A small organ in the throat, the tonsil, has been found to be the point of entrance, and the lymphatic tissue the avenue through which the bacteria enter the system, as has been described. If we are going to follow the case to its ultimate conclusion and give the individual the benefit of all the means available to us, we must recognize the point of entrance and the avenue of invasion, and that point of entrance should be recognized before attempt is made to recognize the definite pathology that has been developed, for the simple removal of the tonsil in that case will not eradicate the pathology. Too often have we known of this recommendation: You will be perfectly well after this focus of infection has been eradicated. But it is well to bear in mind that if definite pathological changes have been instituted, complete recovery will not take place simply because of removal of the primary focus of infection. Again, we must bear in mind that the border line between medicine and surgery is not a definite entity.

J. W. Cokenower, Des Moines—As to the border line between medicine and surgery, just referred to, permit me to say it has occurred to me that there is another border line as it were—whether or not the infection is local, or whether it is constitutional. If local, and the pathological changes taking place show very plainly what the phagocytes and leucocytes are doing, these representing we might say the two armies, one for destruction and the other for building up. When this is the case your line of action should be the opening up and elimination of the point of infection followed by appropriate treat-

ment. But if there is no pathological change existing at the point of contact, then we often have the constitutional effect, when bacterial examination must be made. If, for instance, a streptococcus infection exists, we institute the appropriate serum treatment, promulgated so largely and well in these days, there being a serum for almost each kind of infection. So that in the former we have elimination, in the latter we have counter contact by introducing into the blood stream such agencies as will counteract spreading of the infection.

J. S. Weingart, Des Moines—With regard to the specific action of any infectious agent, recent work on streptococcal infection brings out a point which we sometimes forget. We think of infection as being the result of two forces, the infectious agent and the body resistance. Probably the particular specific action of the infectious agent has been over-emphasized—I think largely over-emphasized, when the claim has been made that a particular strain of streptococcus has been responsible for the production of an appendicitis in a given case, another strain a gall-bladder infection, etc. It is not always easy to produce experimental arthritis in rabbits by injecting strains of streptococci intravenously, but experimenters at the Rockefeller Institute have found that if you inject some living streptococci directly into the rabbit's joint, then treat it so that it will heal, and some time later inject streptococci intravenously, the animal will again have arthritis in that same joint, which would seem to indicate that the injection had sensitized the joint tissue. It occurs to me that many cases come to us in which the pathologic process seems similar to the foregoing experiment: A patient has had an acute infection which we have called rheumatism, but which we should now call streptococcus infection, at least the weight of evidence is turning us that way; the patient gets better, and then some years later he has another attack, and finally will come to the physician all crippled up, and yet it is impossible to find a single focus of infection. In all likelihood what happens is this: In the first attack he did have an evident focus of infection, but in that attack some of his joints were sensitized, and later a very small entrance of the particular organism into the blood stream sets up the arthritis.

I believe that the treatment of rheumatism, like the treatment of cancer, is going to prove to be a question of whether you get it early enough. It is the first attack of rheumatism which should lead the patient to go to a physician for a complete examination, have the tonsils taken out if they show the least sign of anything wrong, the teeth gone over thoroughly, etc. But I do not believe we are going to get very many results from treatment of those cases in which the joints have been previously sensitized to a degree where the entrance of a very small number of streptococci into the blood stream through an almost normal mucous membrane, will set up a new attack in the sensitized tissue.

Dr. Allen—The only thing I wish to say is that in

writing this paper it was my purpose first to try to impress upon others, as it has been impressed upon me, that if we were to do anything to stop general infections, we must do it before the bacteria have reached the blood stream in greater number or virulence than the body is protected against, and this means the early removal of the germ-producing foci; and, second, that a general infection does not differ from a local infection except in distribution, that there is no difference in the reaction that takes place in the tissues in anything except degree, there will be multiple foci whether pyemia or septicemia. These are terms that have served their time.

And finally, I have hope for the future from that which we shall work out in specific therapy, the immunologists will be able to determine with absolute accuracy and give to us as a profession a proper treatment to employ under certain specific and definite indications.

THE EXAMINATION OF THE SPINAL FLUID AS A DIAGNOSTIC PROCEDURE*

JULIUS S. WEINGART, M.D., Des Moines

Ever since the first studies of the cerebrospinal fluid by Quincke in 1891, lumbar puncture has come more and more into use and has proved itself to be a most valuable aid in the diagnosis of diseases of the nervous system. It is not so long since puncture of the spinal dura was looked upon almost as a major surgical operation and was advised only as a last resort. Gradually, however, the prophecy of Billroth, that internal medicine must become more surgical, has proved true here as elsewhere, and fewer and fewer modern physicians venture a diagnosis of obscure nervous lesions without first studying the spinal fluid.

Lumbar puncture is a perfectly safe procedure when properly performed and it is safe to say that the vast majority of reported accidents were due to lack of judgment or to gross carelessness on the part of the operator. The technique of the operation is important, and, inasmuch as there are a number of details not usually emphasized, it has seemed wise to describe it fully.

The selection of a needle is not a matter of indifference. The regular lumbar puncture needle should be used. A syringe is quite out of place. The needle should not be of large caliber, unless a thick viscous exudate is expected, and it should be provided with a stylet and a convenient handle.

The patient should be in a recumbent position

at the edge of the bed, lying on his right side, and with his spine flexed as much as possible. An assistant should grasp him with one arm back of the neck and the other under the knees. Even in sane and phlegmatic patients this will prove to be a wise precaution. Lumbar puncture with the patient in the sitting position is not to be recommended.

General anesthesia is rarely necessary. Novocain or ethylchlorid may be used, but the pain of the skin puncture is slight, and that caused by the passage of the needle through the muscles of the back is almost nil. A twinge of pain is experienced when the dura is pierced but this is too deep to be affected by any local anesthetic. If the operation is skillfully done the patient rarely complains of much more than a sense of unpleasantness.

The site of puncture should be carefully chosen and some mark made so that it can be easily found. The space between the third and fourth lumbar vertebrae is usually selected, at the level of the highest point of the iliac crests.

The needle should be passed precisely in the mid-line and should be directed very slightly upwards. If an obstacle is encountered it is usually a vertebral lamina, and by partly withdrawing the needle and varying its direction the canal can be entered. The only sure criterion that the operator has been successful is the appearance of fluid on withdrawal of the stylet. However undoubted instances of a dry tap are recorded and in cases of advanced meningeal infection it is well to remember that the thick fibrinous exudate may not flow. In these latter cases the careful introduction of sterile saline may be advisable.

At least two sterile test tubes should be ready and should be manipulated by a second assistant. In case a small amount of blood appears at first, the remainder of the fluid can be collected in the second tube. Blood renders two important tests of no value, and it is important, if possible, to obtain the fluid free from this disturbing contamination.

It is extremely important to maintain a most rigid asepsis, not only for the sake of the patient but also for the pathologist who is to examine the fluid. It is often difficult or impossible to render an accurate bacteriological judgment upon a fluid which has not been collected with care.

For diagnostic purposes it is not necessary to withdraw a large amount of fluid. In fact, except when the pressure is high and the puncture is performed partly for therapeutic purposes, it is best to withdraw only 8 to 10 cc. In cases of suspected cerebellar tumor it is advisable, as

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Cushing has pointed out, to be especially careful to withdraw only a small amount.

Normally the spinal fluid is water clear and flows out through the needle drop by drop. Certain data can therefore be ascertained by the operator at the time of puncture, since in meningitis the transparency may vary from slight turbidity to thick pus and the pressure be so increased that in extreme cases the fluid will spurt out for several feet.

Accurate estimations of the pressure are not of sufficient value to warrant the routine use of a manometer. Usually the rate of flow is a sufficient indication of the pressure.

For practical purposes four laboratory investigations of the spinal fluid have proved of most value in the diagnosis of cerebro-spinal and meningeal lesions, namely, bacteriological examination, estimations of the cellular and protein contents, and the Wassermann reaction.

Bacteriological examination should be made in all cases of suspected acute meningitis. It is important to make cultures as well as smears of the sediment, inasmuch as in early cases the organisms may be few in number, and even in advanced cases, particularly in meningococcus infections, bacteriolysis may render a morphological diagnosis of the organism almost impossible.

The cell count should be made as soon as possible after the withdrawal of the fluid. No special apparatus is necessary as the ordinary Zeiss counting chamber is perfectly satisfactory. The normal cellular content of the fluid is usually reckoned as below 8-10 cells per cu. mm. Counts much above this always indicate an inflammatory process. Differential counts of the cells may be made from smears of the sediment.

Some form of protein estimation is also a valuable diagnostic aid. There are a number of different methods, of which, in the writer's opinion, the Noguchi method for detecting increases of globulin, is the simplest and most reliable.

The cell count and the globulin estimation are most valuable in helping to rule out a meningitis, for in case of a negative search for organisms, some doubt may remain as to whether they are really absent. Thus a low cell count and a normal globulin content may be most reassuring in cases of suspected meningeal involvement.

With the exception of the Wassermann reaction other chemical and bio-chemical tests usually tell us little. Suitable analysis of the fluid show the urea content increased in certain cases of nephritis, and the sugar content, in diabetes, diseases which are better diagnosed by other means. Even trichinellæ have been found in cases with this infection, but the limits of this

paper compel us to discuss only findings of real practical importance.

Normal spinal fluids contain some unknown substance which reduces Fehling's solution. This reaction is said to be absent in acute meningitis and, to judge by conflicting reports, is somewhat variable in other conditions. It has not proved of enough value to warrant its routine use.

The same may be said of Lange's gold chlorid test, a procedure which is much more complicated. Kaplan claims, however, that it helps to differentiate general paresis from other syphilitic infections of the nervous system.

In acute meningitis the examination of the spinal fluid is recognized as the only means of making an accurate etiological diagnosis. In infections with the staphylococcus, the streptococci, the pneumococcus and the influenza bacillus, a very high cell count is found consisting chiefly of polynuclears, the globulin is in marked excess and the organism can be demonstrated in either smear or culture.

Inasmuch as specific therapy is available in certain types of meningitic affections, it is advisable not to delay the performance of lumbar puncture but to attempt to make an accurate bacteriological diagnosis as soon as possible. Here as elsewhere in medicine, success or failure often depends on the time at which therapeutic measures are instituted.

However, it must be recognized that in a few cases, one has to deal with a circumscribed localized meningitis, and that the infectious agent may not be evident in the fluid from about the lumbar cord. Every bacteriologist has occasionally to meet with disappointing results in the fluid from obvious acute meningitis. In the writer's experience such cases are usually secondary to aural, nasal, or orbital infection.

In tuberculous meningitis a clear or opalescent fluid is obtained under increased pressure. Often, although no distinct turbidity is seen, a shimmer is noted on viewing it by transmitted light. Floculi of fibrin, although not characteristic, are often seen and a delicate fibrin clot often forms after the fluid has stood for a few hours. The cellular content is increased and consists almost entirely of small lymphocytes. The globulin content is also abnormal.

The demonstration of the tubercle bacilli directly from the fluid is a procedure requiring much care and patience. It is possible, however, in almost every case, provided the fibrin clot is carefully teased out on slides and persistently searched after appropriate staining. The addition of a few drops of sterile blood will cause a

more abundant clot to form and is a great aid in this procedure.

In anterior poliomyelitis the spinal fluid is very similar to that obtained in tuberculous meningitis. Draper and Peabody found a polynuclear increase in a few early cases and noted also that the cell count and globulin do not parallel each other, the former being more marked early, and the latter, later in the disease. Some difference of opinion exists as to the reduction of Fehling's solution by tuberculous and poliomyelitic fluids. Abramson claims that a preponderance of large mononuclears is characteristic of the latter disease. Altogether, it may be said that the differential diagnosis between these two conditions is not entirely settled by a study of the spinal fluid, and that the clinical symptoms are of quite as much importance in this regard. In the recognition of atypical cases of poliomyelitis, however, lumbar puncture may prove of utmost value.

In one case of rabies seen by the writer, the spinal fluid was normal. A pleocytosis has been reported, however, in cases of this disease.

In herpes zoster a moderate increase in the cell count is often found. This is not surprising in view of the fact that the etiology of zoster is probably an infection of the posterior root ganglia.

Many infectious diseases are often accompanied by a syndrome of symptoms which has been called meningism. Whether this term is a fortunate one or not must be left to the taste of the user. At any rate symptoms often appear which may closely simulate those of meningitis and which are apparently only toxic in origin. The spinal fluid in such cases is normal. Dubois and Neal report the results of sixty-nine examinations in this condition with entirely negative results except in four cases where only a slight increase in the cell count and globulin was found.

In acute and chronic poisonings the serology of the spinal fluid is usually normal. Inasmuch as appreciable quantities of the ingested poison or its toxic derivatives have been found in the spinal fluid it is not surprising that in certain cases there is serologic evidence of irritation.

In organic nervous disease other than syphilis the spinal fluid is normal. This with one exception. It has been noted that where compression of the cord exists above the lumbar region xanthochromia, an increased globulin is observed. This is a remarkably distinct serologic syndrome, a yellowish fluid, a low cell count, and a high protein content. These findings are caused by transudation of blood-serum into the spinal canal and are often found when no evidence of hemo-

globin can be found in the fluid. This syndrome is found in a number of conditions, chiefly in compression of the cord from any cause, and sometimes with cerebral tumor. Its presence always certainly indicates an organic lesion.

It is in the detection of syphilis of the nervous system that the examination of the spinal fluid has proved of most value, inasmuch as the Wassermann reaction has been found to be quite as specific when obtained with this fluid as when the blood-serum is used. Certain biological characteristics render the former an even more delicate reagent than the latter. It does not need to be inactivated as it never contains complement, and can be used in larger doses without the danger of non-specific reactions.

Like other meningeal infections syphilis also causes an increase in the cellular and protein content of the fluid.

One of the surprising results in the routine examination of spinal fluids in secondary syphilis has been the great number which show distinct evidence of involvement of the nervous system at that early stage. In untreated cases, Swift and Ellis found 36 per cent. with some abnormality in the fluid, and in treated cases 9 per cent. In cases with meningeal symptoms three out of four showed a positive spinal fluid Wassermann. Altmann and Dreyfuss report seven out of fifty-six cases of secondary lues with a positive reaction in the spinal fluid and all the other serologic evidences of inflammation.

It is evident, therefore, that early leptic invasion of the nervous system is by no means uncommon, and this complication should be watched for by physicians who have charge of patients with secondary syphilis.

In latent tertiary lues, Altmann and Dreyfuss found one out of six with a positive spinal fluid Wassermann. How long a positive reaction may exist before symptoms are manifest, we do not know, but it is safe to assume that the optimum time for warding off a serious lesion is illustrated by just such an instance.

In syphilitic meningitis, the cell count is often very high, reaching sometimes 1200 cells per cu mm. The cell count itself helps to differentiate this type of lesion from tabes and paresis where the pleocytosis is usually below 200. The globulin content is increased and the Wassermann reaction is positive.

However, in some cases of cerebrospinal lues the Wassermann may be positive in the blood and negative in the spinal fluid. This, the so-called Plaut type, comprises about 50 per cent. of all cases reported. Strange to say the reaction may be absent when the cell count and globulin are

quite abnormal. In cases of leptic involvement of the nervous system where the spinal fluid is normal the lesion is probably an endarteritis.

In tabes all variations of the serologic picture are found. In the cases of Swift and Ellis 66 per cent. showed a positive serum Wassermann and 86 per cent. a positive spinal fluid Wassermann. The cell count and globulin were increased. A few cases of undoubted tabes are reported with hyperlymphocytosis but with a negative Wassermann in both blood and spinal fluid. However tabes with a normal fluid does not in my opinion exist.

In general paresis either serum or spinal fluid Wassermann or both are positive. Negative reactions in both rule out the disease absolutely. Marie and his pupils classify paresis serologically into three stages, first the incipient stage, with a positive serum Wassermann and negative spinal fluid Wassermann; second the fully developed stage, with positive reactions in both, and third, the stage of decline with a positive reaction only in the spinal fluid. This conception has been in general confirmed by other observers.

Enough has been said to indicate the importance of a complete serologic study of all cases of nervous lues, inasmuch as blood and spinal fluid together tell us much more than does either alone. The importance to the patient as to whether he has an incurable or a curable lesion is very great and warrants painstaking care when such a case presents himself to his physician.

Much remains to be hoped for in the diagnosis, as well as the treatment of cerebral, spinal, and meningeal lesions. If, however, this paper shall have served to emphasize a few of the salient facts of which we are quite sure at present, it shall have fulfilled the purpose of the writer.

Discussion

G. H. Hill, Des Moines—Within a couple of weeks Dr. Weingart has examined the spinal fluid and performed a Wassermann for one of my patients, because I am purely and simply an alienist and am guided and influenced more by mental symptoms in my patients than by any other. Last month we admitted into the Retreat a druggist who had been practicing his business for thirty-seven years constantly. When he came into my care he had expansive delusions and exhibited restlessness and silliness and other symptoms which are common in paresis, and although there was no history of lues in this case and the patient and relatives were positive that no infection of that sort had ever been experienced, yet on account of the mental symptoms exhibited, my mind was not at rest until these proofs had been made by Dr. Weingart. Fortunately for all concerned, as far as the morals, family record,

etc., are concerned, the tests of the blood and of the spinal fluid were both negative.

My understanding is that the men who are present here today, and all up-to-date practitioners, wish to make all tests possible that are reasonable, in order to be sure of their ground and enable them to practice medicine scientifically.

THE INTER-RELATION OF PELVIC AND ABDOMINAL PATHOLOGY*

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The association of disease of the contiguous structures of the pelvis and abdomen, especially that of the appendix and right ovary, has occurred so frequently in the experience of all, that today the surgeon very rarely thinks of disease of the one without suspicion of the other. As viewed in the light of today, an operation on the appendix alone in the female abdomen would be incomplete without an examination of the generative organs, especially the ovaries, and vice versa, unless it should happen that such an additional pathology were in the presence of conditions demanding ultra-conservative surgery, such as suppurative, malignant or impending moribund conditions. But otherwise, unless the last named conditions are present, it always behooves the surgeon, in the majority of cases at least, so to make the incision that it will be feasible for him to work upon any nearly-correlated pathology.

The intimacy of the pathology of the pelvic viscera and the other pelvic structures, when taken alone as a group, has been recognized for many years and the same with the lesions of the upper abdomen; but that either of these two groups (pelvic or upper abdominal) should be and very, very frequently is causative of pathological conditions in the other, has not struck home sufficiently to the majority of us as yet. I shall deal with the direct and indirect methods of extension later on, but at this time I would like to call your attention to the importance of early removal of pathology in the one group, especially the pelvic, in order to obviate or check a secondary pathology in the other. I would also, at this point, have you reflect upon the fact that certain pathologies such as cholecystitis, for instance, if of not-too-long standing, will be allayed in the majority of cases by simple or even no antiseptic biliary medication, after a distant septic source, such as the appendix, has been removed, and as I shall discuss further along, pelvic pathology, etc., does cause appendicitis, etc.

In this paper I shall be concerned only with

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the female generative organs, instead of both the male and the female, as they are by far the most frequently involved with abdominal pathologies. But it must not be understood that the male genitalia play no part in an exchange of lesions, for as Keyes reports, at least thirty-two cases of peritonitis due to vesiculitis or deferentitis have been reported in the literature. The abdominal gastro-intestinal tract will also be dealt with almost exclusively, as the other abdominal structures and the parietes take so little part in a communication of pathology, as to be rather a rarity.

With these curtailments of my paper it will be more specific to entitle my subject: The Inter-Relation of Female Genito-Urinary and Gastro-Intestinal Pathology. And even then I shall limit my discussion to the most usual and frequent kinds of pathology, *i. e.*, the chronic or sub-acute inflammatory, with due reference to the mechanical, reflex and internal secretion mechanisms of extension. In a few instances, on the contrary, I shall go beyond my field in order to cite the relation (an apparent systemic connection) of these abdominal and pelvic infections to such glands as the thyroid and tonsil. Acute inflammations, benign and malignant neoplasms, hæmorrhages, syphilis, tuberculosis, actinomycosis, etc., require a different kind of cerebration and have no place in my paper. A prominent clinician recently remarked that "the tendency of the literature of today is to devote whole volumes to the rarities and to give but little space to the everyday commonalities which mean health, life and death to so many." In my discourse today I hope to be immune to any such indictment, for I believe you will all agree, that the title of my subject, at least, does deal with the health, life and death of many.

The literature of the last ten years has not dealt with these pan-relative, pelvic and abdominal conditions frequently enough, and of course before that time still less was known about them. As a result of this neglect the average medical mind even today looks upon each and every pathological condition as a separate and distinct entity. During 1909, 1910 and 1911 this interchange of pathology was given its maximum attention by such Europeans as Widner, Rosethorn, Rona, Lockwood and Pankow; while in America some of the gynecologists as Webster, Kelly, etc., gave it some, but as I believe, not sufficient heed. Hagen, Pallin, and Witzel of Berlin (Abstract in the A. M. A., August 27, 1910), in an article entitled "Non-Puerperal Appendicitis of Gynecologic Origin," stated that in their last series of two or three hundred plain and simple appendectomies, about 30 per cent. must have

been of such gynecological origin. Another author, Muller of Germany, about this same time made the startling statement "that 60 per cent. of all females have appendicitis before or at puberty, intrinsically or extrinsically, *i. e.*, primarily or secondarily;" and to me it has often seemed that this incidence was not overstated.

The primary foci for the origination of a chain of surgical pathology in the abdomen and pelvis are many and various. The appendix is no doubt first in frequency, the female genitalia next, the gall-bladder probably third, floating kidney fourth, gastric ulcer fifth. Adhesions, intestinal stasis *per se*, partial or complete splanchnoptosis, local circulatory drainage lesions, as hæmorrhoids, and parietal conditions, as hernia, may be thought of as of the non-inflammatory causes of constipation with a resultant sequelæ. A defect in the pelvic supports, as a lacerated perineum, frequently initiates a mechanical chain of pathology, such as, prolapsus uteri, rectocele, cystocele, hæmorrhoids, etc. A cervical tear, besides causing a general neurosis, and neurotic hyperchlorhydria leading to gastric ulcer, may cause splanchnic constipation with a resultant break at what seems to be the weakest point in the gastro-intestinal tract—the appendix. Ochsner's text-book explanation of the causation of gastric ulcer from chronic appendicitis is no doubt familiar to us all.

Lane's prosecution of the demon colon, as he sees it, even attributing exophthalmic goitre to the resultant toxæmia of a stasis of its contents, must have a ground in fact, as I myself saw him ignore a pathologic gall-bladder full of stones with the statement that "the condition would subside after the colectomy." We Americans present did not think so, however.

A primary tube and a primary ovary with secondary involvement of the appendix have recently been reported by P. Segond of Paris and R. Wanner of Leipsic.

Chronic endometritis may also begin its train via tubes to the ovaries and appendix, or by inflaming the pelvic peritoneum cause adhesions of the intestines and omentum with a resultant gastro-intestinal disturbance; or as A. C. Stokes of Omaha recently pointed out, the pelvic peritoneal involvement may cause a hydronephrosis from stenosis of the lower end of the ureter by kinking or pressure. I will report a case at the end of this paper wherein I believe the mechanics of the attempts at expulsion of a foreign body by the uterus set up a chain of pathology, mild infection no doubt being auxiliary.

Gall-bladder infections with adhesions to the pylorus frequently cause gastric-ulcer or gastrec-

tasia by interference with the pyloric opening. Infected bile, also is causative of a pancreatitis and hepatitis, and in the intestines of an appendicitis, the last of which I believe was secondary in a case which I also will report to you.

A right movable kidney often effects a stagnation of bile by pressure on the gall ducts with a resultant infection from the stasis, which in its turn, like typhoid, precipitates the nidus of gall-stones. Its occlusive pressure on the ascending colon may cause stasis and a mechanical appendicitis; and the increased virulence of the colonic contents because of the bacteria under pressure, may result in an infective appendicitis.

Interchange of infection between the genital and urinary tract is not unknown and a systemic metastatic infection to the kidneys from an abdominal focus, could from the voided urine, complete a circle via the uterus back to the original starting point in the abdomen. I would not care to make an affidavit as to the actual happenings in this last hypothesis, however.

But of all the miscreants the appendix is no doubt the arch offender. It spreads its pathology via the ligament of Clado to the right ovary and from there via the peritoneum or endometrium to the left ovary. Pankow's investigations that the etiology of adnexial disease (lately by Rosenow and Davis, indicated to be due chiefly to the streptococcus viridans and the Welch bacillus) runs as high as 22 per cent. from appendicopathia, as Aschoff the Freiburg pathologist has shown, certainly places the appendix in the foremost list of outlaws. (The incidence of the other chronic infections of the adnexia he estimates as 43 per cent for gonorrhea, 22 per cent. for tuberculosis, and 13 per cent for puerperal sepsis.) The spread of infection from the appendix to the liver and bile via portal circulation is clearly shown by the almost constant appearance of tenderness of the gall-bladder and liver, sooner or later, when there is an established condition of appendicopathia. These biliary conditions as I stated in the introductory party of my paper, usually clear up readily if appendectomy is not too long delayed, even without biliary antiseptics in the majority of cases.

Rosenow in his "Etiology of Cancer of the Stomach" demonstrates that there is often the same type of bacteria in the lower and upper abdominal lesions. He and Davis accentuate this view in the A. M. A. Journal of the 16th of last month and also accredit hæmatogenously infected ovaries as being primary to secondary foci in the gall-bladder, appendix, joints, etc.

Besides the type of bacteria, their increased virulence and the lowered opsonic index of the

individual also play an important part in the extension of these pathological conditions.

Simultaneously independent pathologies, may also, and often do occur; and these may then have separate or interacting trains of pathology.

J. B. Murphy, in his February, 1916, clinics, states that the history of a case should constitute 80 per cent. of the evidence, and the physical findings, laboratory diagnosis, etc., the other 20 per cent. However, it will be impossible for me to give you any detailed history of the cases I am about to report to you, and a mere outline must suffice, as time and space would not permit otherwise. I trust the data in each case will be considered sufficient for my purpose. I would I could go into lengthy detail, as I have in the past, in certain obscure cases, written as many as eight pages in order to determine whether the primary condition was appendix, gall-bladder, or some other infection.

The following cases which I consider more or less typical were selected from my histories as I happened to remember about them:

Case A.—Mild Endometritis Primary—A hair pin inserted in the uterus, by the multipara herself, for the purpose of terminating a three months pregnancy was retained points down until operation three years later. There was profuse leucorrhœa all this time with severe spasmodic cramps in the lower abdomen. New pains in the appendix area began the last year before operation, and tenderness in both this and the gall-bladder regions was found three months before my operation. Operation disclosed omental and intestinal adhesions to the tubes and ovaries of both sides. An unclean operation by another three months previously, and for the appendix trouble only, had also caused many additional adhesions. Loosening of adhesions, double salpingectomy including both cornua of the uterus, left oophorectomy, resection of right ovary and a dilation and curettage, with removal of the hair pin, resulted in a perfect cure to date—now almost seven years later. The tubes in this case were remarkable. The walls were very much hypertrophied, and there were additional concentric thickenings every one-fourth to one-half inch as if demonstrating a participation with the uterus in its explosive efforts to remove the foreign body. J. Wallert in the Zeitschrift für Geburtshilfe und Gynakologie, Stuttgart, April 21, 1910, writes of Nodular Hypertrophy of the Fallopian Tubes, but I have not seen an abstract or reprint of the article.

Case B.—Gall-Bladder Primary—A male, Mr. W. S., forty-two years of age, had undoubted and uncomplicated gall-stone attacks for the last twelve years. He never felt anything in the lower abdomen until the last few years of the twelve, when an increasing soreness in this region with each upper abdominal attack began to manifest itself. At the time of examination he was very tender over both the appendix and the gall-bladder. The early gall-

stone attacks had the jaundice and ague symptoms of an obstructive and an infective condition. Operation disclosed both diagnosed conditions, the atrophied and thick walled condition of the gall-bladder indicating its long standing.

In contra-distinction to the case just cited, I have another case in mind where a doctor brought a very much weakened and vomiting girl to the hospital for a choledochotomy. A careful history, examination and observation revealed an old catarrhal appendix trouble with subsequent ovarian and gall-bladder involvement. The vomiting was found to be due to an unsuspected two months pregnancy. The patient was not operated and recovered to her usual chronic status as the pregnancy went on.

Case C.—Kidney Primary—Miss T. R., aged thirty-five, was perfectly well until a bowling accident seven years ago which apparently resulted in a tender movable kidney for several months. Nothing was done for the condition and several years later she noticed a tenderness at McBurneys point and sometime after this, dysmenorrhea for the first time in her life. Urine was clear and there was no leukorrhea. An appendectomy, ovarian resection of the cystic ovaries, and nephropexy of the mobile kidney resulted in complete relief. Here the probable pressure on the ascending colon seemed to have caused cecal stasis with a resultant appendicitis and cystic ovaries.

Case D.—Appendix Primary—Mrs. H. P., aged thirty, multipara, consulted me seven years before operation when I made a diagnosis of appendio-pathia, cystic ovaries and a mild cholecystitis. Nothing was done for the condition at the time. Two years later a sudden enlargement of the right thyroid occurred. This at the time yielded readily to the galvanic current. Upon seeing her five years later, symptoms of a gastric ulcer were present, the lesions of the first examination were aggravated and there was present a sub-involution of the uterus due to an interrupted three months pregnancy. She now also had hæmorrhoids, a cystitis and enlarged tonsils. After an appendectomy, resection of cystic ovaries, ventral suspension, curettage and subsequent gastro-enterostomy, the patient made a good recovery. An increase in weight and subsidence of the cystitis and hæmorrhoids was accelerated by tonics, hexamethylenamin, laxatives, and a regulation of diet.

In another case of an acute goitre, the etiology no doubt was due to an extensive ovarian involvement. The thyroid enlargement occurred only two weeks before operation, and subsided rapidly with an ice bag, an appendectomy and resection of the very large, walnut sized, cystic ovaries. There has been no recurrence of any kind to date—now four years later.

At the present writing I have a case in the hospital, wherein I advised and performed an appendectomy, resection of cystic ovaries and a curettage for an increased size of both thyroid lobes. The thyroid condition was the only trouble the patient consulted me about primarily. On the fifth

day after operation, the thyroid had so decreased subjectively and objectively that I requested our present chairman of the surgical section to visit the case, as he had previously evinced a desire to witness any favorable effect of the remote surgery upon the gland.

Case E.—Lacerated Perineum Primary—Mrs. J. F., aged thirty-six, since her tenth and last puerperium three years ago has ailed continuously. She was always perfectly well up to that time and never had an obstetrical complication before, but the last time, she says, it was found necessary to perform a version. Constipation, loss of weight, pain in the back on exertion, increasing spells of soreness in the lower abdomen and severe headaches caused her to seek the advice of several physicians without relief. When I saw her she had a second degree laceration of the perineum, a very deep laceration in the left side of the cervix, and acute sensitiveness at McBurneys point. The vaginal fornices seemed negative. I have not operated her as yet but it does seem like two independent pathologies beginning at one and the same time. If operation disclosed a right cystic ovary as a chain of connection between the two, one might infer that the pelvic mechanical or slight endometrial catarrhal condition caused the abdominal. I have felt certain of such a connection in other cases in the past. One could also deduce that the constipation was due to the mechanical or reflex effect of the tears upon the bowel, the constipation in turn causing the appendicitis. I did not go into this case thoroughly enough to determine the exact etiology of the appendicitis, if such were possible.

J. B. Murphy in his February, 1916 Clinics, page 18, discussing the diagnosis of a case of retro-displacement of the uterus which he thought caused an ulcer of the stomach, remarked as follows: "We all know that in the presence of third degree retro-displacement of the uterus the functioning of other abdominal organs may be entirely disarranged."

I hope these few cases may serve to establish most of the points I have tried to make in my article. I could cite innumerable additional cases, if such were necessary, in order to demonstrate the necessity of a broad viewpoint in the analysis of abdominal and pelvic pathology.

In conclusion there are two things I would again emphasize. First, the importance of an early diagnosis and eradication of any primary abdominal or pelvic lesion—be it ever so mild—which may be potential for distant trouble. Second, the fact that the primary lesion should always be sought even when there are other and possibly overshadowing secondary lesions present, as the removal of secondaries only will not effect a cure; but on the other hand, especially in selected cases, it often happens that the removal of the primary lesion alone will affect its sec-

ondaries to subside without their operation. As the result of such analysis and treatment both the task and the risk of this all-important and frequent smouldering abdominal and pelvic pathology will be materially reduced, and at the same time better temporary and permanent results will be realized.

Discussion

Dr. L. C. Kern, Waverly—This paper is on one of the most practical subjects that we have had presented at this meeting, for many of the ideas and thoughts brought out are matters that come up every day in connection with the cases in which we have occasion to open the abdomen. The relation between pelvic pathology and abdominal pathology is certainly more than a relative one. In the discussion of Dr. Allen's paper on "The Pathology of Bacterial Infections," read yesterday, Dr. Weingart referred to the sensitiveness of certain tissues on account of a previous infection, subsequent infection developing in the same location. Dr. Weingart had reference in particular to the joints and other focal infections.

That very many times we find the gall-bladder infected when we have an infection in the appendix or in the tubes, is a matter of common knowledge at the present time. Only last week I had occasion to remove four large calculi from the common duct in a very large fleshy woman who gave the history of having had pelvic pathology some seven years before, and, so far as I know, has had no typhoid fever or other infection that might produce a calculus. She has never been a mother, so we have not the condition of pregnancy to consider. We have no doubt that the fourteen stones removed from the gall-bladder and the four from the common duct had their origin in the pelvic pathology.

Another case came in for removal of a large ovarian cyst. At the time of operation I removed the cyst and did a hysterectomy for fibroids. Passing the hand up to the gall-bladder, I found that this woman has innumerable gall-stones of small size. She does not know at the present time that she has them, I have not told her yet, but the history discloses that in all probability the condition in the gall-bladder is due to the pre-existing pelvic pathology. We know that many times infection of the appendix is very prone to produce disturbance in the gall-bladder, or ulcer in the stomach or duodenum. I have noticed in particular the reflex condition, simulating gastric ulcer, produced by some pelvic pathology. I have in mind a young lady who two years ago, while in Oregon, had her appendix removed, with some relief. Following this she had attacks of uncontrollable vomiting. At first her physician thought she had gastric ulcer. However, the stomach washings and analysis of the stomach contents proved to us that conditions outside the stomach were responsible for the symptoms. At that time she had a third-degree retroversion of the uterus, and she had other pelvic pathology not quite clear on account of adhesions that had formed following

the previous operation. Laparotomy disclosed the fact that she had pyosalpinx and a large cystic ovary, and, as stated, a third-degree retroversion of the uterus. Passing the hand up and examining the stomach and gall-bladder we could find nothing abnormal about either one. The truth was that correction of the retroversion and removal of the tube and ovary absolutely cured the stomach condition. This case goes to prove the contention of the essayist that the relation between pelvic pathology and abdominal pathology is a very real one.

Dr. Schrup is to be congratulated on the bringing out of so many practical points in his excellent paper.

Dr. W. C. Newell, Ottumwa—I have enjoyed Dr. Schrup's paper very much. I think it is very much in keeping with our general findings, especially when we take into consideration the amount of abdominal surgery that is being done today. We have a class of cases coming to us, complaining of indefinite symptoms; the seat of the pain seems to be in the pelvis, radiating to the region of the gall-bladder or appendix, in fact all through the abdomen. We removed the appendix, and still the pain exists; we re-operated and removed the tube, possibly a pus tube, in fact all the pathological tissue in sight, and still a continuation of the pain. These pains, in my opinion, are probably due to an irritation from some low form of infection that has produced a neuritis of the nerves supplying the parts, and can only be relieved by the removal of the pathology and overcoming the results of the infection by building up the patient with appropriate treatment of the parts affected.

Dr. Schrup—I have nothing further to say except that I had hoped to hear more extensive confirmation of my views, although I feel that most surgeons who do very much work have no doubt of the relationship. By going into the history very carefully we find that in nearly every case the primary lesion can be established. There may be several primary foci, but this should be definitely determined. Secondary lesions so often over-shadow the primary, that no doubt the latter are frequently overlooked, and I think that is the reason why many surgical cases do not get well. The operation locally may be very fine and the local results perfect, but if the original lesions in the case have gone so far as to result in a secondary involvement; or, on the other hand, the operation has relieved only the secondary condition due to a hidden primary lesion, then we do not give the relief the patient seeks.

THE TECHNIC OF TONSILLECTOMY*

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Since Rosenow suggested to the medical profession that the tonsils may act as foci of infection, their complete removal with the capsule intact has steadily increased in importance until we now believe in resorting to surgical interfer-

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ence whenever we are dealing with a disease which is focal in origin and from which all other foci can be reasonably excluded.

By surgical interference we mean the complete removal of the faucial tonsil within its capsule, including the plica at the base which carries with it many lymphoid follicles. As has been repeatedly demonstrated, this plica is capable of reinfecting or keeping up a general infection which clears up when the offending plica with its infected lymph follicles is removed.

Many operations with varied technic have been devised, which in the main, in the hands of their originators, give satisfactory results. In view of this it would seem desirable that each operator should use and perfect the technic which to him seems most logical and best adapted to his individuality. The technic originated and perfected by Matthews is of wide application, ease and rapidity of execution, with the minimum of discomfort for the patient. This operation has been used at the Mayo Clinic for the removal of tonsils, *in toto* in more than 10,000 cases, with a high degree of satisfaction. The ages of the patients ranged from five to seventy-five years; their mental, physical and personal characteristics varying as much as it is possible for the mind to conceive. Many patients whose general condition precluded the use of a general anesthetic have been operated on with safety by this method. The operation has the advantage over many others in that it is applicable to various types of tonsils, such as the small, flat, submerged and the large pendulous, as well as those firmly bound down by old quinsy scars, or the cicatrices of one or more previous incomplete, and often, multilating operations.

As a general rule, all patients of twelve years or older are operated on with local anesthesia. However, many children from seven to ten years of age and a few from five to six have been operated on with local anesthesia. The latter were well trained in obedience and had faith and confidence in the operator. All patients operated on with local anesthesia are instructed to eat their usual meal beforehand and to appear at the appointed time.

With assurance on the part of the operator, the patient is subjected to two brushings of the tonsils with a cotton-tipped applicator dipped in a ten (10) per cent. solution of cocain, an interval of five minutes being allowed between the first and second brushings. Five minutes after the second application the patient is transferred to

the operating room where sterilized instruments and solutions have been prepared. The patient is seated in an ordinary white enamel operating chair, both feet resting squarely on the floor, and requested to look the operator in the eye and to breathe naturally. The tongue is gently depressed and from two, to two and one-half drams of a one-tenth ($1/10$) of one per cent. cocain solution, to which has been added one minim of adrenalin chloride solution, $1/1000$ to the dram, is carefully injected between the capsule of each tonsil and the pillars with a Matthews syringe.

Immediately thereafter, when cocain is used, and a minute or two after when novocain (the solution preferred) is used, the tongue is depressed with a tongue depressor until the anterior pillar is distinctly outlined at its origin at the base of the tongue. The blunt point of a Robertson knife is inserted into the triangular space formed by the taut anterior pillar, the base of the tongue, and the tonsil, and carried between the anterior pillar and capsule of the tonsil, up and over the superior pole, after which it is caused to descend between the posterior pillar and tonsil. The upper pole of the tonsil including the capsule is now grasped with a modified Richard forcep and traction made toward the median line of the pharynx; at the same time the superior constrictor muscle with its fascia and the venous plexus of the pharynx is gently pushed away from the tonsil with the Robertson knife in such manner that the glosso-pharyngeal nerve does not sustain injury. The dissection is carried to the base of the tongue; a Tidding snare armed with No. 7 piano wire is looped over the forcep and continued over the dissected tonsil to the base of the tongue when the wire is sent home.

The technic of removing the second tonsil (both tonsils are always removed at one sitting), is the same as the preceding. The throat is then inspected for any remnant of lymphoid tissue remaining in the so-called plica at the base of the tongue on either side. If present, the operation is completed by grasping the remnant of tissue with a tonsil forcep and removing it with a snare or with Prince's scissors. The fossæ are dried with absorbent cotton and tincture of iodine applied, thus controlling capillary hemorrhage. The mechanical application of the iodine accelerates both venous and arterial hemorrhage, either of which can be detected as a red area on a brown background and can be readily picked up by a hemostat and pinched or ligated as the judgment and experience of the operator dictates.

INFECTIONS OF THE LACRIMAL SAC
AND THEIR TREATMENT*

C. P. COOK, M.D., Des Moines

The past few years have given birth to a number of operations for the drainage of the lacrimal sac. Whether these operations are new, or old ones revived or modified, is of little practical importance. That which is of importance is, that the interest manifested in these operations points to a dissatisfaction with the treatment in vogue for infections of the lacrimal sac.

(1) It is conceded that a vast majority of infections of the lacrimal sac are secondary to intra-nasal malformations and infections. The extension of the inflammation from the nose may be metastatic or by direct continuity of tissue, or an inflammatory process may extend up the nasal duct to the sac. More often intra-nasal disease obstructs the naso-lacrimal duct, causes a stasis of the lacrimal fluid in the sac and bacterial growth and infection ensues.

(2) The bacteriology of dacryocystitis is legion, but a few types of infection predominate. In the simple acute form of the disease, the pneumococcus is the most frequent offender (in 40 per cent. of all cases). Next in frequency comes the influenza bacillus. As the infection takes on a chronic form, the staphylococci are added. In phlegmonous inflammation of the sac, the streptococcus is nearly always responsible, while in the more mild inflammation, as found in mucocele, the xerosis bacillus is often present with a motley grouping of the less pathogenic bacteria. The less frequent infections found are those by the Morax-Axenfeldt, pyocyaneous, colon and pneumo-bacillus of ozena.

(3) In trachoma districts, many cases of chronic dacryocystitis are attributed to the trachomatous infection. Often in chronic inflammations of the sac, the tuberculosis bacillus is probably responsible for the trouble when it is not given the credit.

(4) Twenty-five cases were reported in the Frieburg clinic within a few years, and in a microscopical examination of sixteen sacs preserved and not suspected of being tubercular, in two cases the tuberculosis bacillus was found. Usually in chronic dacryocystitis the infection soon becomes a mixed one, but in tubercular infection, the common pus producers are not often found; and as a rule, there is not a complete obstruction of the naso-lacrimal duct.

A small percentage of the infections of the

lacrimal sac are metastatic. In some instances the infection reaches the sac by direct extension from an infected ethmoid, or it may extend along the naso-lacrimal duct from the nose to the sac. Gummatous necrosis of the lacrimal bone is responsible for a few infections; but a vast majority of the bacteria that infect the sac are washed into it from the surface of the globe by the lacrimal secretion.

When the nasal duct is patulous, these bacteria pass through the drainage apparatus with impunity. Only when there is a stasis of the fluid in the sac do they become harmful. Therefore, we conclude that a great majority of the infections of the lacrimal sac have a dominant etiological factor in the nose, and any involvement of the eye is only a complication of a nasal disease.

When the rhinologist takes over the treatment of infections of the lacrimal sac, he steals nothing from the oculist but merely comes into his own.

The first symptom of dacryocystitis is an epiphora. When this symptom appears, the rhinologist should be consulted to ascertain what is obstructing the drainage. The inferior turbinate may be the offender. An infected ethmoid labyrinth or nasal polypi may be responsible. Pressure due to a deflected septum may be an etiological factor, or a general hyperemic engorgement of the nasal mucosa, due to sinusitis or other causes, may need attention.

These measures may be classed under preventative treatment and are curative only in the incipient stages of the infection. Yet they are about the only measures that are curative with a normal functioning organ retained.

After an infection is established but a small percentage of cases are cured, from a bacteriological viewpoint, and any treatment that does not eliminate the infection, can not be said to cure the disease. In dacryocystitis, the sac is a focus of infection from which complications arise that are more serious than the disease itself. The common complication is conjunctivitis, which is always present in some degree, and is often complicated with corneal ulcers. Often the only means of healing the ulcer and saving the eye, is to remove the sac. While infection exists in the sac, any eye, which from occupational causes is subject to abrasions or irritation, is in constant danger of having these breaks in the epithelium transformed into dangerous ulcers. Furthermore, until the sac is in a healthy condition, no operative procedure on the globe can be contemplated.

As in the treatment of infective foci elsewhere, two modes of treatment are advocated; drainage

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and extirpation. Drainage by means of probes and stiles was long the accepted treatment. Under this treatment, relapses were the rule, and it is doubtful if in chronic cases so treated, the infection was ever entirely cleared up. In acute cases, irrigation in combination with intra-nasal treatment and vaccine therapy should be given a thorough trial. My experience with vaccine therapy has been too limited for the statistics to be of much value, but I have had encouraging results in some acute cases when I combined irrigation and intra-nasal treatment with the vaccine therapy.

(5) While some still hold to the stile and probe treatment, in chronic cases, many leading oculists have adopted extirpation of the sac in all chronic infections and believe it to be the only reliable method for the eradication of the disease.

These operations of Toto, West, and Mosier are along the lines of conservative surgery, their object being to maintain a functioning organ by making a short cut drainage from the sac into the middle meatus of the nose. As far as the relief of the epiphora is concerned, these operations appear to give very good results in a high percentage of cases, but the same objection applies to these operations as to the successful probe and stile treatment; even with good drainage, infection does not always clear up. There is left a short patulous route from the nose to the palpebral cul-de-sac.

(6) The secretions from the nose, which almost constantly harbor myriads of pathogenic bacteria, are forced into the eye whenever the nose is blown. This being true, the operation is contraindicated in those cases in which, from occupational causes, the eye is exposed to lacerations and abrasions.

This also holds true in eyes subject to or having corneal ulcers or phlyctenules and in all cases where operative procedures on the globe are contemplated.

There have been many favorable reports as to the bacteriology of the eye, following the West and similar operations, but the operation is too new for statistics to be conclusive. Other cases have been reported in which good drainage was secured with a continuation of the infection.

(7) Dr. Fisher reports a case in which the West operation was performed with good drainage results, but six months after the operation, pus was still present in the eye and daily treatments for three weeks failed to eradicate it.

(8) Dr. Tyding reports a similar case in which four months treatment failed to clear up the infection and it was necessary to remove the

sac. These operations were performed preliminary to cataract operations.

The greatest objection to the removal of the sac is that the patient is often left with a troublesome epiphora. The principal cause of epiphora is over-secretion due to reflex irritation from the canaliculus sac or duct. If the sac is totally removed, the nasal duct thoroughly curetted; if the canaliculi are cut short, and the wound is caused to heal under a firm compress which completely eradicates the cavity left by the operative wound, there is seldom a troublesome epiphora.

It seems to me that until we have more convincing statistics as to the bacteriological cure resulting from these newer operations, the extirpation of the sac is the safer procedure, when we take into consideration the welfare of the eye. In view of the fact that not a negligible number of these infections are tubercular, the conservation of the general health of the patient in these cases, at least, demands the radical operation.

In conclusion, I would emphasize that the complications of the infections of the lacrimal sac are more grave than the disease itself; that the only reliable method of eradicating a chronic infection of the sac is its extirpation.

The eradication of so important an organ as the lacrimal sac is always to be deplored, and the West and similar operations give promise of the best results of all conservative methods. However, the results of these operations are not yet ideal and as the etiology of most infections of the sac is an intra-nasal pathology, an early diagnosis of stasis should be made and the cause removed before a chronic infection is established.

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Discussion

Dr. G. F. Harkness, Davenport—Mr. Chairman and Members of the Section: It goes without my saying anything that we have all enjoyed Dr. Cook's excellent resume of this subject. Some one has said that we should not become therapeutic nihilists as I think that we are all at times inclined to do. Likewise I am sure that infections of the lacrimal sac and their treatment have left many of us at times in a quandary as to just where we stood. Probing has been unsatisfactory in many cases and the oculist has advocated extirpation and then the rhinologist comes along and says let's tackle this problem from my end of the line. Our methods of procedure seem to go in cycles or waves and I fear

that we are not always logical in our reasoning. The idea of making an opening from the sac into the nose is not new. Even Galen proposed such a course. From 1840 to 1860 it was quite the proper thing, and then it fell into the discard. Auboret in 1904, followed by LaGrange and Toti in 1906 helped to revive this procedure. The Toti operation perhaps marked the first distinct advance but Hirschberg Axenfield and others have expressed themselves as dissatisfied with it. Toti controverts this by stating the opening is often not made large enough. The West operation, though preceded by that of Polyak, has, I believe, been more favorably received in this country. Priestley Smith declines extirpation and has recourse to stiles. One is overwhelmed by the number of opinions and varieties of technique. VonEicken attacks the duct through the maxillary sinus; Yankauer has his modification which really tries to disarrange nature less than the others.

Now when we have so many methods there is something wrong with all of them and we want the answer to the question as to what you and I are going to do with the cases that we are going to live and neighbor with. First, where is our essential primary pathology? Kuhnt states that in 97 per cent. of cases it is in the nose. If so, does the secondary infection depend upon the nasal condition for its continuance? I am not considering those cases prior to cataract operation or with an infected cornea for these demand extirpation or obliteration by Gifford's method.

The radical measures as proposed never leave your patient in a normal condition; so consider them, but not with undue haste. With acute cases seen early, probe them. If there is a distinct pointing under the skin, open and drain and probe through the opening. The old Agnew incision between the caruncle and the internal commissure is still to be used in cases. Do not inject argyrol after probing. Also after probing be sure that the probe enters the nasal cavity and does not have its end covered by mucous membrane. It is essential to keep the drainage maintained for a few days by a wick of gauze through the stab wound. As to chronic cases, it is essential to give the nose the proper medicinal and surgical attention supplemented by probing. If not effective, consider each case individually. The largely distended sac with little duct stenosis particularly invites the use of an autogenous vaccine first. With marked duct stenosis give the West or Yankauer operation a trial, to be followed, if ineffectual, by the use of stiles and lastly we have extirpation or obliteration of the sac, which we know eradicates the sac pathology, but our patient should always know that we are closing one of nature's drainage passages and that he may always have some slight trouble at times in the way of epiphora which can only partially be helped by removal of the lachrymal gland.

Dr. Ralph Parker, Des Moines—Acute dacryocystitis in infants presents an interesting phase of this question. Here the rule holds, as in adults, that there is first a stenosis of the drainage duct into the

nose, which may have been due to a developmental defect before birth. The stenosis is usually in the lower end of the duct. This is followed by a dilation of the sac which fills with a fluid made up of tears, epithelial cells and bacteria. Some of these bacteria penetrate the sac wall into the surrounding loose connective tissue and a phlegmon results.

My treatment of these little patients is along more simple lines than formerly. The abscess is incised and drained. The lower canaliculus is dilated sufficiently to permit of washing the sac out daily with mild antiseptic solutions. The mother is taught to make gentle pressure over the lachrymal sac frequently. She keeps the eye cleansed with boric acid eye wash. Following this plan of treatment it will seldom be necessary to resort to the use of probes.

Extirpation of the sac in adults for infection of lachrymal sac has never appealed to me as being good surgery. It is a sign of progress when a man like Mosher can devise an operation and by his perfect technique, successfully drain these infected tear sacs into the nose.

It does not make much difference whose operations you and I do on these cases, so long as we establish good drainage into the nose. This is correct surgical treatment. We must not only take care of the infection, but we must also establish a drain channel for the tears.

Dr. F. W. Dean, Council Bluffs—In a recent number of the Ophthalmic Record, Dr. Harold Gifford described his operation for obliterating the lachrymal sac. He makes an incision into the sac under a local anesthetic, and packs with gauze dampened in adrenalin chloride. As soon as the bleeding has stopped, he protects the skin with an ointment and wipes out the sac with a small ball of cotton on an applicator dampened with trichloroacetic acid.

When I read the description of the operation I confess that I did not think well of it, but soon afterwards I had a patient with ulcerations of both corneæ and a chronic dacryocystitis. The patient refused an operation but consented to have the sac lanced and medicine applied. The result was so satisfactory that I have performed the operation eight times since. In one case there was an abscess of the sac which was an acute exacerbation of a chronic condition. There was a great deal of swelling of the lids and of the tissues surrounding the eye. I lanced down into the sac, and put in a gauze drain. The next day I applied the trichloroacetic acid. The final result was as satisfactory as if there had been no acute condition present.

Dr. C. P. Cook, Des Moines—In conclusion, I do not care to leave the impression that I absolutely condemn the use of the probe. I feel that it has a limited field of usefulness as a palliative measure.

The statistics as to the bacteriology of the eyes following probe treatment of the duct, is limited, but the frequent relapses of cases so treated has shattered any faith I may have had in the efficacy of the probe treatment in clearing up chronic infections.

HERNIAS OF THE URINARY BLADDER

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The permanent or temporary escape of a part or the whole of the urinary bladder, through any of the usual or unusual hernial orifices, is uncommon. Nevertheless, many cases have been published and a much larger number have been allowed to pass without record. In a long series of hernia operations, every surgeon is certain to meet with some instances of hernia of the bladder. The urinary bladder in part or in its entirety is present in one per cent. of all hernias.

Though the term hernia implies the presence of a hernial opening, of a hernial sac, sac-contents and sac-coverings, we know that in many hernias of the urinary bladder, the sac is either incomplete or totally absent.

To designate the clinical entity under consideration, we fail to find any other term more appropriate, more sanctioned by long usage than that of hernia of the urinary bladder.

Many operators have unknowingly punctured, incised, ligated or removed a herniated bladder-process and then closed the hernial canal and operative wound in the usual way. Bladder protrusions have been excised by mistake for hernial sacs, or stitches used to close hernial canals have been passed too deeply and found at the necropsy to have caught the bladder.

An analysis of all the vesical hernias reported with sufficient data in the English, French and German languages from 1896 to 1914, inclusive (literature to which access can be had at the John Crerar Library, Chicago, Illinois), and also on some unpublished personal cases (in all one hundred and fifty-nine patients, representing one hundred and sixty-four vesical hernias), justifies, in our opinion, the following conclusions:

1. The urinary bladder, in part or in its entirety, may escape from the abdominal and abdomino-pelvic cavities through any of the uncommon or common hernial orifices of the lower abdominal wall.

2. Hernias of the urinary bladder occur in both sexes, at all ages, and in all races. They are congenital or acquired, recurrent, recent or of some standing; almost always unilateral, very rarely bilateral. Like other hernias, they vary in shape, size, rate of growth and in the discomfort and disability which they entail.

3. In the female, vesical hernias occur in nullipara, primipara and multipara; they occur previous to, during, or after gestation and be-

tween gestations. They neither interfere with gestation nor disturb parturition.

4. According to anatomical site, vesical hernias are designated as hernias of the linea alba, of the obturator, femoral or inguinal regions. Anatomical relations justify the further subdividing of the two latter types into interstitial or intra-parietal, direct or indirect, complete or incomplete, pudendal or scrotal.

5. The relation of the herniated bladder-process to the serous membrane lining the peritoneal cavity is well expressed by the terms: Intra-peritoneal, para-peritoneal and extra-peritoneal. These designations are serviceable from the viewpoint of etiology, symptomatology and treatment.

6. According to clinical manifestations, hernias of the urinary bladder are reducible, irreducible, inflamed or strangulated.

7. A vesical hernia may be single, double, or one of two or more hernias located on the same or opposite side of the body, having dissimilar contents, and presenting like or unlike anatomical and clinical characteristics. Thus, the same patient may present an inguinal cystocele and a femoral epiplocele, a reducible femoral vesical hernia and an irreducible inguinal intestinal hernia. Case reports of an inguinal vesical hernia on one side coexisting with an inguinal enterocele, epiplocele or entero-epiplocele on opposite side of the body are not uncommon.

8. As etiological factors, in the causation of vesical hernias, the following are foremost:

- a. All conditions that tend to increase intra-abdominal pressure.

- b. All conditions, congenital or acquired, that weaken the abdominal wall.

- c. All diseases of the lower urinary organs that impair the expulsive force of the bladder or abnormally hinder the outflow of urine.

- d. Pre-existing hernias and hernial sacs of pre- or post-natal origin.

9. The pre-operative signs and symptoms may be unmistakable, vague or absolutely wanting. In addition to such symptoms as are common to all other hernias, vesical hernias present peculiar suggestive and positive manifestations of their existence. Chief among the former are such disturbances of micturition as the following: Frequent, painful and difficult urination, vesical tenesmus, urgent desire to urinate caused by pressure upon hernial swelling and two-step urination. Chief among the positive manifestations are: A hernial swelling increasing in size with urinary retention and decreasing with urination; increasing in size with air—or water-distention of the bladder and decreasing upon withdrawal of these agents; passage of a sound into the

herniated bladder-process by way of urethra and bladder; cystoscopic demonstration of the vesical orifice of the herniated bladder-process.

10. The herniated bladder-process may be the sole content of the hernial swelling, or merely one of the associated contents. In addition to a bladder-process, a hernial swelling may contain a part of one or more of the following organs: ureter, fallopian tube, ovary, appendix vermiformis or appendix epiploicae, omentum, and small or large intestine.

11. The herniated bladder-process may be free or adherent to surrounding tissues or organs, structurally normal or present degenerative, inflammatory or neoplastic changes; may be the seat of atrophy, hypertrophy, catarrh, gangrene, tuberculosis or carcinoma, and may or may not communicate freely with the general vesical cavity. The herniated process of bladder may contain one or more calculi.

12. The vesical hernia may be the sole existing anomaly, or it may be one of two or more, congenital or acquired, pathological states, having or not having any relationship of cause or effect to the hernia (cryptorchism, vaginal cystocele, prolapsus uteri, prostatic hypertrophy, etc.).

13. Truss treatment for hernias of the bladder is not curative, is often productive of discomfort and may injuriously affect the structure of the bladder-wall.

14. In patients over ten years of age, all hernias, irrespective of anatomical site, clinical condition or contents, should, in the absence of a constitutional state contra-indicating operations of election, be subjected to an operation for radical cure.

15. Clinical conditions so closely simulating hernias of the urinary bladder that a positive diagnosis without operation appears impossible, should be subjected to operative treatment. Only benefit can be derived from adherence to this rule. A diagnosis is established and a cure is effected.

16. All hernias of the urinary bladder, irrespective of sex, age or social condition of patient, irrespective of size, shape, anatomical site or clinical type, call for operative treatment. Operative treatment is free from danger and is curative. The only contra-indications to operative treatment are extreme old age and the co-existence of a pathological state or states contra-indicating operation of election. Operative treatment is the only rational treatment of hernia in the adult.

17. Operative intervention is indicated in all incarcerated and in all strangulated hernias of the bladder.

18. In all hernias, the ideal time for operation is previous to the development of degenerative

or other pathological changes in the herniated organ or organs and previous to the occurrence of any of the various complications incident to hernias.

19. Women who suffer from any form of hernia should be carefully watched before, during and after their confinement, so as to prevent or rather minimize any undue strain upon weak regions of the abdominal wall. These women, at the close of lactation or towards the end of the first year following their confinement, should, in the absence of contra-indications, be subjected to an operation for radical cure of the hernia. In the female, the inguinal rings are comparatively small. They can without inconvenience to the patient be closed.

20. The most popular and efficient modern hernia operations permit a full view of the operative field and allow such a careful examination of the hernial rings, canals, and surrounding structures, that a prolapsed or herniated bladder-process rarely escapes detection.

21. In inguinal and femoral hernia operations, after careful opening and isolation of the sac, see that the latter consists preferably of peritoneum only, and that its neck be freed from all other structures. Neck of sac should not be twisted, as by so doing the bladder is drawn towards the hernial opening and is liable to be included in the ligature. Necrosis and peritonitis result therefrom.

22. In the course of a hernia operation, if, after opening the sac and reducing its contents, there appears a second sac, the latter is not to be opened, unless the introduction of a sound in the bladder shows the complete independence of this sac from the urinary reservoir.

23. In hernias of the urinary bladder, first expose and free the herniated organ or organs, and then reduce it into the abdomino-pelvic cavity. Follow this by suppressing the hernial sac if one be present, and then strengthen, according to an approved method, the weakened hernial area. Resection of the herniated bladder-process is only exceptionally indicated. When performed, it calls for immediate reconstitution of the urinary reservoir.

24. During hernia operations, the wounding of the urinary bladder can, to a large extent, be prevented by careful operating and by keeping in mind that this clinical entity occurs.

25. Wounds of the urinary bladder inflicted during the course of hernia operations, give a good prognosis if they be immediately repaired and if an appropriate post-operative treatment be instituted. In the repair of bladder-wounds, two or three layers of continuous or interrupted absorbable sutures give satisfactory results.

Bladder suturing is to be followed by refection of the abdominal wall of the hernial area.

26. If within twenty-four to forty-eight hours after a hernia operation on a healthy subject the catheterized urine contains blood, determine the origin of the blood. If a bladder-injury be present, open the hernial operative wound or laparotomize or do both and repair the injury.

27. The mortality of operations for the radical cure of hernia, if performed at an opportune time by a rapid and skillful operator competently assisted, is practically nil. Coley operated 1000 consecutive cases of hernia without a single death.

28. The operative treatment of hernias of the urinary bladder is highly satisfactory.

INDUSTRIAL INSURANCE

VIZ.

THE PHYSICIAN

G. BALDWIN PALMER, M.D., Fort Dodge

In bringing this subject to your attention I realize that it is not one pertaining to the advance in scientific medicine, but is rather one concerning our economic condition, present and future.

Industrial conditions, the public health and the physician in relation to them, have been recurrently thrust before the attention of the public and profession in many ways. While we have been endeavoring to raise the standard of our efficiency, forces imbued with motives of selfish self betterment, as well as forces entirely antagonistic to the medical profession, have been fixing our status in the economic scale for us.

This is a day in which unity of those having a common interest is required. Organization is the cry on every hand. Just the other day a statement appeared in a Chicago paper that 10,000 farmers in the vicinity of the city had successfully negotiated a raise in the price of milk to the distributors. When the producing class can become sufficiently cohesive to control the output, then, indeed, must the poor consumer suffer. It is not the purpose of this paper to decry the trend of the times as regards social legislation in which we of the profession are vitally concerned, but by comment and a review of recent legislation and literature recall to our notice what is being done along these lines.

Industrial conditions are at a period of unrest. In a report of the Commission on Industrial Relations and the Public Health, we find a few facts for the first time given the authority and endorsement of a government commission. It revealed the fact that while much attention had been given of late to accident prevention, accidents had caused but one-seventh as much destitution as had sickness. Each of the 40,000,000

wage earners in the United States loses an average of nine days each year through sickness, at an average cost of \$2.00 a day. The wage loss through this source is over \$500,000,000, while the added cost of medical care brings the total to over \$680,000,000 a year.

We are individually prone to miscalculate the economics of our lives. Our calculations are based on the theory that we will remain well and able to work. We do not allow that perhaps we may fall sick, and find all our plans go wrong. We lay nothing away as a sickness emergency fund. The economic reasons for keeping well never enter our plans.

Industrial hygiene and the health of the people whose daily wage depends so largely on their physical efficiency, have come to constitute one of our most pressing industrial problems. Its solution will require the best efforts of all parties concerned, and especially should it receive the attention of the physician lest he be obliged to accept—as he is at present doing under the Iowa State Liability Law—whatever pittance the separate insurance companies see fit to dole out to him.

There is no doubt that in the near future we must devise some means of sickness insurance. Already we are a decade or more behind many European countries in this matter, and we who are supposed to constitute a true democracy must come to realize that what is good for the many will prove of benefit for all.

In sickness insurance the employer, the employee and the public pay the premiums for insurance against the loss to which each group is liable in case of sickness of employes. In this way the loss is distributed and a strong incentive created in each group to reduce the cost by preventing sickness. While relief of sickness must be the primary object of such insurance, prevention of sickness will be the greatest result. There can be little doubt of this, when results of insurance in other fields are studied. The principles of sickness and indemnity insurance I believe to be entirely proper. The method to be followed in outlining a comprehensive plan whereby the burdens, benefits and emoluments shall be equitably distributed is a problem requiring the patient effort of the best minds of all classes interested.

The experience with sickness insurance in foreign countries has been such that practically every European country has some form of sickness insurance law; and in those countries with comprehensive laws, the results have been encouraging. No country has repealed their laws; on the contrary, many have extended and strengthened them. In the United States, no state or national provision exists, but there are several mil-

lion persons insured against sickness in unions, fraternal orders, establishment funds and commercial companies. It is therefore no novelty, but a method which is growing in popularity. As I have said before, some system of accident and sickness insurance will soon be written in the Federal or state laws, and as it is primarily a medical question, it behooves us to be awake that we may have a voice in whatever constructive legislation is required.

In the Journal of the American Medical Association, December 11, 1915, is a plan devised from one of Europe's most successful governmental systems. The plan outlined is too extensive to repeat in this paper, so I have but jotted down a few important features.

1. Insured persons, those of income \$1,000 or less.
2. Funds collected from employes, 50; employers, 40; government, 10.
3. Benefits—Cash B weekly after first week, for twenty-six weeks in year unless raised by commission. Death—B. (Covers medical and surgical care. Medical—B. (whether due to accident, non-industrial or commercial, sickness and child-bearing by the beneficiary.
4. All rules and regulations promulgated by commission created for this purpose, composed of members from each class of contributors. Provision is made for free choice of a physician from those listing themselves as willing to practice under this plan.

The medical and surgical benefits should be adequate, including medicines and appliances, in house, hospital or office, for all disability as provided under the law. To supervise the distribution of the benefits equally and to where they belong, a corps of medical officers, nurses, etc., should be provided.

When we come to this last clause—the selection of medical officers, also the impaneling of physicians, their remuneration, etc., we come to a phase of the problem where we should combine our efforts to avert the conditions imposed on the medical profession in some of the European countries. In England the profession had struggled for years with friendly societies, fraternal orders, insurance societies and charity practice. They expected relief from the National Insurance Act, only to find an extension of their trouble. Lloyd George, the author of the act, did not recognize the medical profession, did not admit them to an audience until just before the bill was submitted. He did, however, admit and take council from representatives of fraternal societies, etc. When the bill was up for passage, amendments by the score were talked on to the measure. The Medical Association of England and those interested, succeeded in having amendments adopted that disposed of some of the objectionable features, but the method and amount of remuneration was not fixed in the bill as it was finally adopted.

Warren, the author of the article in the Journal of the A. M. A., seems to be in favor of a per capita assessment, and that each physician registered under the act should receive the same annual amount per patient, whether the patient is sick or well. I fear this smacks too strongly of contract practice in fee simple to be swallowed by the profession of the United States, and, yet, if the medical profession does not have a care, it will be like the small boy who eats at the second table—"He gets just what he gets."

If we must have a readjustment of social and economic conditions in industrial affairs, the writer is in favor of some plan under federal or state control. I can see no use in allowing private insurance companies to reap the rewards of a humane procedure.

In Wisconsin approximately \$2,000,000 has been collected from employers. Of this amount \$800,000 was paid to injured employes, \$400,000 for professional services, leaving a profit to the insurance companies of \$800,000. This would seem to be a good argument for supervision by state authorities.

When the Iowa state law was before the legislature, an effort was made by the Industrial Commission of Iowa for state control, but this was defeated by private interests.

The absurd cry of politics is constantly raised when it is proposed to place a reform measure under state control. The same cry was raised when it was proposed to place our charitable, penal and educational institutions under special commissions, or boards of control.

The State of Iowa has asked the medical profession to render services to its workmen for less than the regular fees. Was it for the purpose of providing private Iowa companies with a profitable business or was it intended as a general welfare movement? In January of this year bills were introduced before the legislatures of Massachusetts and New York having compulsory health insurance features. These bills were drafted by the American Association for Labor Legislation in co-operation with a special committee appointed by the American Medical Association. These bills will cover all cases of sickness or accident and will apply to all laborers or others earning less than \$100 a month. Benefits will include medical, surgical and nursing attendance, medicine and surgical supplies and cash benefits for a maximum of twenty-six weeks of the year, also a limited funeral benefit. We believe that these active efforts are but the beginning of a more widespread movement in the same direction. The point we wish to emphasize is that the medical profession take a more active part in this matter and insist that the state take it over as a proper function of the state. If we allow it to remain in the hands of the politicians, the result is already foretold.

The Journal of the Iowa State Medical Society

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JOHN B. MURPHY, M.D.

Dr. John B. Murphy was born in Appleton, Wisconsin, December 21, 1857, and died at Mackinac Island, Michigan, August 11, 1916.

Dr. Murphy has been known for many years as one of the most skillful surgeons and one of the ablest clinical teachers that the world has known. It is probable that his clinical teaching at Mercy Hospital, Chicago, has never been equalled in the history of medicine. Dr. Murphy had a personal enthusiasm that carried his audience with him and so completely infected them with the subject of his discourse that all else disappeared from the minds of his hearers. Not only was it the personality of Dr. Murphy that made him great, but also the accuracy of his knowledge and the direct and convincing way in which a subject was presented to a class of students or a body of medical men. His intellectual leanings were in the direction of scientific accuracy, which led him to seek in the beginning of his career, a careful and thorough foundation for his subsequent work. After graduating from Rush Medical College in 1879, Dr. Murphy served an internship in Cook County Hospital; in 1882 he went to Europe for the purpose of extending his knowledge of scientific medicine. He was fortunate in coming under the influence of two of the greatest teachers that Germany has produced; Dr. Theodore Billroth, famous for his clinical work, and Dr. Albert so distinguished as a surgical diagnostician. Dr. Albert was never noted for the amount of operative work done, but his skill and clearness in describing surgical con-

ditions, and his remarkable ability to teach surgical diagnosis, made him one of the great figures in medicine in Germany. It was under the inspiration of the teaching of these men, that Dr. Murphy commenced his medical career. In 1884 he was appointed lecturer in surgery in Rush Medical College, and in 1892 he was made professor of clinical surgery in the College of Physicians and Surgeons, and in 1901, professor of surgery in Northwestern University Medical School, and continued in that capacity until the time of his death.

In the reorganization of Mercy Hospital staff in 1895, Dr. Murphy was made chief of the surgical staff, which position he also held until the time of his death. Dr. Murphy's chief college and hospital activities were with Northwestern University and Mercy Hospital, but at various times he held positions of responsibility in other hospitals. For thirty years he was consulting surgeon of Alexian Brothers Hospital, for several years attending surgeon to Cook County Hospital, and consulting surgeon to St. Joseph's and Columbus Memorial Hospitals, and the Hospital for Crippled Children, Chicago.

Dr. Murphy's contributions to surgery were very numerous and were read with interest and profit wherever medical science was cultivated. He was also a member of many medical associations. He was a member of the American Association of Obstetricians and Gynecologists; a member of the Southern Surgical and Gynecological Association; a member of the Western Surgical Association; a fellow of the American Surgical Association and in 1910 he was elected President of the American Medical Association. He was President of the Clinical Congress of Surgeons of North America; one time President of the Chicago Medical Society. In 1913 he was made a Fellow of the Royal College of Surgeons of England; he was a life member of the German Surgical Society, and an honorary member of the Surgical Society of Paris. Dr. Murphy was recipient of honorary degrees from the University of Illinois, Notre Dame University and the Catholic University of America, and the University of Sheffield, England, conferred upon him the degree of M.Sc. in 1908. The last honor conferred upon Dr. Murphy was that of knight commander of the Order of St. Gregory the Great, by the Pope. These several honors were conferred as a testimonial of the appreciation of the immense value of the work of Dr. Murphy in advancing medical science. They were borne by him with ostentatious dignity and without in the least causing him to forget or overlook his friends in the humbler walks of professional life.

Notwithstanding the fact that Dr. Murphy was throughout his professional life, forced to be watchful of his own health, the amount of work that he produced was great, much beyond the conception of the ordinary man. For several months past he had been in poor health and it was apparent to him and his friends that the end was not far off. On contemplating Dr. Murphy's life work, we cannot but feel a profound regret that the twelve years more of expected activity, bringing him to that period of three score and ten, deprived the world of immense benefits.

It always brings us pleasure to record interesting incidents in medical society work. We have too much looked upon medical gatherings as scientific bodies only interested in discussing scientific things and forget perhaps that there are social relations and activities that contribute as much to doctors welfare as listening to and discussing medical or scientific papers.

For sometime older members of the Iowa and Illinois Central District Medical Association have thought that it would be quite proper to celebrate the fiftieth anniversary of the organization of this body. During the fifty years of its existence this society has entertained distinguished members of the profession and the secretary, L. W. Littig, was insistent that there was nothing too good for this particular occasion and so it was that Dr. Isaac A. Abt, of Chicago, Dr. W. J. Mayo, of Rochester, Professor L. G. Rowntree, of the Medical Department of the University of Minnesota and John G. Bowman were pressed into the service of furnishing the society with intellectual material, while it was left to the members and their wives to furnish the entertainment. It was thought that no more appropriate place could be found for the meeting than the Blackhawk Watch Tower, Rock Island. Fifty years seems a long time when measured by the span of an individual life but when measured by the things that have really happened, the period is short.

We remember that eighty years ago the territorial legislature of Wisconsin,—of which Iowa was a part,—passed an act by which a line was run from the south end of Rock Island directly west indefinitely for the purpose of dividing that part of Wisconsin known as Iowa into two counties. The one north of the line to be known as Dubuque county and the one south to be known as Des Moines county. It was near here that Dr. Muir, a regular army surgeon,—a graduate of the University of Edinburgh—married his Indian wife. This was in 1820. After two children had been born the War Department directed that

the officers of the United States Army having Indian wives should separate from them. Dr. Muir, with true Scotchish blood in his veins refused to be governed by this order and resigned from the service and lived along the Mississippi at various points until 1832 when he died of cholera, leaving an Indian wife and five children in almost destitute circumstances. Many things relating to the early history of the settlement along the banks of the Mississippi river happened near this place. One familiar with this history could contemplate the view presented from the Blackhawk Watch Tower, with a feeling that right and wrong had many interpretations and the selfishness and personal gain was not unknown to the early settlers in the region. Another feeling would arise of how selfish gain, enterprise, building of steamboats and the building of railroads could transform, in so short a period, a wilderness into beautiful cities, possessing all the advantages of modern civilization.

Another interesting medical meeting was attended by Dr. Mayo's party two days later, near Jacksonville, Illinois, on the farm of the distinguished physician and surgeon, Dr. Carl Black. Dr. Black is the fortunate possessor of a large farm some twelve miles from Jacksonville, which has been occupied by members of his family in lineal descent for a period of more than seventy years. Some years ago Dr. Black conceived the idea of having an annual medical picnic on his farm sometime during the month of August and for several years a large gathering of doctors and their families for more than fifty miles around gathered for a day, each bringing his picnic basket and enjoying in the beautiful groves, in groups, an old time picnic dinner in which the ordinary medical gossip was indulged in, including old times and new times, the ups and downs of medical practice, their family relations and the latest favorite automobile, forgetting all the worries, anxieties, personal controversies, professional jealousies and all the unpleasant sides of medical life, having what might be called a good old fashioned time. After this for an hour it is the custom to gather in a tent and listen to addresses from distinguished members of the profession who are always glad to participate in a truly family picnic, and on this occasion the addresses were furnished by Dr. W. J. Mayo and Prof. L. G. Rowntree. The Mayo party, of which we happened to be a member, after a ride of 100 miles in an automobile, reached Beardstown late in the night and early in the morning resumed our journey in time to enjoy a most delightful breakfast at Dr. Black's country home and par-

ticipate with between 200 and 300 doctors and their families in a gathering that was more helpful to the ethical welfare of the profession than any scientific program could possibly offer. Men from Galesburg and from Springfield, Beardstown, Jacksonville and Quincy joined hands as if bitterness had never grown up among professional neighbors. Not only were there doctors from the towns above mentioned but from many country villages came doctors in the spirit of harmony which leads to friendship and expansion of the spirit of medical helpfulness.

THE OWNERSHIP OF X-RAY PLATES

Very delicate questions are involved as to who should own the X-ray plates the patient has paid for. No court decision has been handed down on this question, but we believe if it is understood that the patient is to pay for them, the plates would belong to the patient, but the wise surgeon will allow no question of this kind to arise but simply have the plates made on his own account as a part of his diagnosis and make a fair charge for his skill and care in the use of every reasonable means of arriving at a correct diagnosis under such conditions. The X-ray plates would no more belong to the patient than the tape measure used in measuring the injured part. In case of suit it is probable that the court could order the plate to be produced. If the party went to another physician to have an X-ray plate of an injured part it would be entirely optional on the part of the operator to make the plate or not and if the party paid for it the plate would be his. If however the party applied to another doctor for an opinion as to the nature of his injury and although a part of his opinion was based on the X-ray plate, the plate belongs to the doctor unless it was agreed that a special charge should be made for the plate. These are matters that the profession should be very careful about. Many a malpractice suit has been started because some doctor has made and showed the patient of another doctor an X-ray plate which, while the functional result was good, the plate was made to show a great deformity. To illustrate this I am presenting a case of my own. The accompanying plates show a fracture of the humerus compound in nature caused by direct violence. The injury was of such a nature that we were obliged to depend on extension by adhesive straps, weight and pulley. No infection occurred and after a few days we were able to use in addition, lateral splints rather lightly applied. The condition of the fracture was carefully inquired into every day. At the end of three weeks the condition was

carefully inquired into and found so satisfactory that a plaster Paris splint was applied to give the patient greater freedom, that is, to get out of bed. There was no X-ray machine in the hospital where this patient was treated and we were obliged to depend on methods of examination employed before X-ray came into vogue. Three weeks after the cast was applied we concluded it should come off but before doing so turned the patient over to a roentgenologist to X-ray the arm, only giving directions of a general character as to what I wanted. The operator made and showed to the patient plate No. 1. Imagine



FIGURE I

FIGURE II

the horror of the patient on viewing the condition of his arm. I had in the meantime cut off the cast and found the arm in a highly satisfactory condition and showed him how straight and nice his arm was, but his mind was not quite at ease. I shortly afterwards looked at the plate and could not wonder at his feelings.

I could see at once that the operator, an expert, had distorted the plate to an extreme degree on account of the angle at which the roentgenogram had been taken. Plate No. 2 was made ten days later under my personal direction. See what might have happened. In due time the man resumed his employment as a switchman without the slightest inconvenience, which was surely a test of the capacity of the arm.

SIR ALEXANDER R. SIMPSON, Kt., M.D.

There are still men living like ourselves who recall with pleasure the reading of the three volume edition of Sir James Y. Simpson's works.

We were young in medicine in those days and although Sir James died in 1870 yet the views of great men were sure to hold over for a year at least without being controverted and we could lay by the teachings of a master with a feeling of certainty that we could with safety take them to the bedside of our patient. These feelings came to us recently on reading a biographical sketch of Sir Alexander Simpson appearing on the editorial pages of the Edinburgh Medical Journal. It was our privilege to meet Sir Alexander at the International Medical Congress in 1876 and later to receive a personal note from him in response, we take it, of warm expressions of appreciation of the impressions Sir James' teachings had on the mind of a young practitioner.

We reproduce an interesting paragraph from the obituary referred to. "It is a somewhat remarkable fact that twice only in the nineteenth century did the Chair of Midwifery and Diseases of Women and Children in the University of Edinburgh fall vacant and that on each occasion a Simpson, uncle and nephew, was elected to fill it. James Hamilton, who had succeeded to the professorship in the year 1800, was followed in 1840 by James Y. Simpson, and on his death in 1870 Alexander Russell Simpson was selected to take his place. For more than half a century the Simpsons dominated Edinburgh obstetrics, and it was a fruitful and 'benevolent despotism.'"

THE NEBRASKA STATE MEDICAL JOURNAL

We have received numbers one and two of the Nebraska State Medical Journal, and are very much pleased with its appearance. Nebraska has just come in line with most of the other important states in publishing a journal fully under its own control. It seems that many of the states have gone through the experience of contracting with private journals for the publication of their transactions and have found sooner or later that this was unsatisfactory because the purpose is not only to publish the papers read before the Society, but the concentrating of the influence of their own journal on questions that relate to the public policy of the state. We have long known that the mere passing of resolutions by a state society did not accomplish anything, and if any good could be done by the state organization, it must be through publicity efforts exercised by a journal under their own control. It is probable that if there is anything wrong in the profession it can be corrected by publicity and by a constructive policy that will show that one way of doing things is better than another.

We cordially welcome our esteemed neighbors

to the ranks of medical journalism and while we feel quite sure that the road will not always be smooth, yet we trust that no serious obstacles will lie in the way.

Richmond, Iowa, August 26, 1916.

Editor of Iowa Medical Journal.

Dear Sir: I wish to tell you of an incident that happened to me as a member of your society. A Mr. Foster, representing himself as the manager of the Standard Laboratories of Chicago in the state of Iowa, came to me stating the Pharmacist was going to try in the next legislature to deprive the doctors of dispensing their own drugs and suggesting to me a plan that the standard laboratories of Chicago was doing all they could to help put it down, and proposed by his slick way that I take out stock in the company which I did at \$100, which he claimed will draw 7 % interest paid semi-annually at 3½%, also claiming I could buy from them cheaper drugs and when I bought to the amount of \$100 I would get a debenture of \$125 drawing interest, and at the end of the five years I would get back the principal at interest of \$110 with the debentures as I bought the drugs. I will suggest to you that we have a little column on the first sheet expose just these things and ask every doctor write you as they know of such fakers, if I would have had the chance of being posted I would be \$100 better off today. Please let me hear from what you know of this fake and warn the rest some way.

J. M. CHITTUM, M.D.

Richmond, Iowa,

Dr. D. S. Fairchild,

Sept. 2, 1916.

I saw this man Foster yesterday. He told me he had seen Brayton of Wellman, Iowa, and wrote him up, also Dr. Stutsman, of Kolana, Iowa, and Dr. Blyth of Riverside, Iowa, and wrote him up for stock as a member of this Syndicate, also Dr. Gardner of Webster and Dr. Harrison of Wayland, and a number of others. I asked him why he did not work in Iowa City and larger towns, he claimed he could not work the larger towns yet as good as he will later. Please see to it, whether it is O. K. or not.

DR. CHITTUM.

P. S.

He wanted to write me for more stock yesterday. I told him that I wish I had not taken what I had taken, he wanted to know why, I told him that I had inquired of Dr. E. A. Boice of Washington and he told me it was no good, that it had sold out once already in two years, his answer was to that, that they were getting ready to dispose of Truax as they did not like Truax in the Company. This Mr. Foster is from Mount Vernon, Iowa, up near Cedar Rapids.

Fraternally yours,

J. M. CHITTUM,

Richmond, Iowa.

Richmond, Iowa, Sept. 14, 1916.

Dear Editor: I wish to send you a letter I received today in regard to the Standard Laboratories

of Chicago, Ill. You can see by the tone of the letter, that they are in a hurry to get to graft more on their members. I don't expect to buy any thing from them. I will see if they pay up the interest on my \$100 semi-annually.

I met the Mr. Foster one day in Riverside, Iowa, I told him I wished I had out what I had in the syndicate. He asked me why. I told him there was so much faking now that I did not trust the scheme. I will keep you informed. This seems to me it ought to have been taken up sooner by some of the profession, if it had I would not have been caught in it.

I could kick myself yet for giving them my \$100.

I see now my mistake.

Yours fraternally,

DR. CHITTUM.

Chicago, Illinois,

Sept. 15, 1916.

Dr. J. M. Chittum,

Richmond, Iowa.

Dear Doctor:

Will you, several years from now, be helping to support a Drug Company, or will a Drug Company be helping to support you?

Our members who have been shrewd enough to acquire as many Debentures as possible will be sharing in the profits of a National Company with thousands of customers. Their holdings will help make them independent of their professional work. Will you be among that number. REMEMBER—Supply limited. One for every \$100 of purchases. Start ordering now.

Very truly yours,

THE STANDARD LABORATORIES,

ERJ:HCA

By E. P. Johnson.

INSUFFICIENT EVIDENCE OF MALPRACTICE

The Appellate Court of Indiana, Division No. 2, affirms a judgment in favor of the defendants, who were charged with malpractice in the treatment of a compound fracture of the bones of the plaintiff's right forearm. The court says that, to its mind, the evidence showed nothing more than the acts of the defendants while engaged in setting the injured bones as these were observed by the plaintiff and his wife, the nature of the treatment by Dr. Miller thereafter as they observed it, the statement of the defendants as to their belief that the arm would be restored to its usefulness, and the fact that the arm was not straight when the splints were removed. There was no evidence that any physician had given the jury any standard by which the fact in dispute could be properly determined, and, since the jury was not permitted to draw the conclusion of unskillfulness from the result of the operation or treatment, it seems to the court that to permit the jury to determine the case without some competent evidence as a standard from which it might be determined whether the services rendered by the defendant were done with reasonable care and skillfulness would be to permit a determination of that question from mere speculation and conjecture. When a physician and surgeon

assumes to treat and care for a patient, in the absence of a special agreement, he is held in law to have impliedly contracted that he possesses the reasonable and ordinary qualifications of his profession, and that he will exercise at least reasonable skill, diligence and care in his treatment of him. This implied contract on the part of the physician does not include a promise to effect a cure, and negligence cannot be imputed because a cure is not effected; but he does impliedly promise that he will use due diligence and ordinary skill in his treatment of the patient so that a cure may follow such care and skill, and this degree of care and skill is required of him, not only in performing an operation, or administering first treatments, but he is held to the like degree of care and skill in the necessary subsequent treatments, unless he is excused from further service by the patient himself, or the physician or surgeon on due notice refuses to further treat the case. In determining whether the physician or surgeon has exercised the degree of care and skill which the law requires, regard must be had to the advanced state of the profession at the time of treatment and in the locality in which the physician or surgeon practices. But where a physician or surgeon is employed as a specialist on account of his peculiar learning and skill, he is bound to bring to the discharge of his duty to patients employing him, as such specialist, that degree of skill and knowledge which is ordinarily possessed by physicians who devote special attention and study to the disease, its diagnosis and treatment, having regard to the present state of scientific knowledge. In either case the legal duty of the general practitioner of medicine and surgery and the legal duty of the specialist must be measured by some legal standard. It must be tested by some competent evidence so that the jury may have before it a proper standard by which it may determine the acts or the omissions of the physician or surgeon.

BOOK REVIEWS

COLLECTED PAPERS OF THE MAYO CLINIC, ROCHESTER, MINN., 1915

Octavo of 983 Pages, 286 Illustrations.
W. B. Saunders Company, Philadelphia and
London, 1916. Cloth, \$6.00 Net, Morocco,
\$7.50 Net.

The seventh volume of the collected papers of the Mayo Clinic, appeared in June, and contains the papers prepared by some fifty writers, the product of individual workers or the joint work of different combination of workers. Most of these papers were prepared for medical societies and first published in medical journals or transactions of medical societies. These papers are based on original observations made at the Mayo Clinic and fairly represent the productiveness of this great institution.

The contributions are arranged in groups; twenty-six relating to the alimentary canal; thirteen to the urogenital organs; thirteen to the ductless glands;

sixteen to the head, trunk and extremities; five to technic and fifteen general papers.

The editing of Volume seven, (1915) under the personal direction of Mrs. M. H. Mellish (as all of the volumes of the series) is most admirable and shows the highest order of literary taste.

In seeking for some special subject for review, one is at once lost in the wealth of material. The ductless glands naturally invites our attention. The work of Kendall, Wilson and Plummer has quite revolutionized our ideas of the relationship of these glands to the general system. Upon these studies the clinical bearings have been worked out by several observers on the clinical side. We are pleased to note the productiveness of several of the younger men who are growing in professional favor, particularly Balfour, Henderson, Carmen and New.

PROGRESSIVE MEDICINE

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Assisted by Leighton F. Appleman, M.D., Volume 19 No. 2, July 1, 1916. Lea and Febiger, Publishers, Philadelphia and New York, \$6.00 Per Annum.

The first section of the digest of medical literature is by Dr. W. B. Coley on traumatic hernia, particularly relating to Workmen's Compensation. Dr. Coley holds firmly that traumatic hernia is extremely rare, and that appears to be in accord with the opinion of all observers whose opinions are worthy of serious consideration. Dr. Coley shows that the attitude of the courts in relation to traumatic hernia is liable to do corporations and Workmen's Compensation very great injustice. It may be assumed however that the courts will not take a different view as long as legally qualified men testify that hernia is often caused by strain and slight injury of various kinds. Dr. Coley also reviews the literature on unusual types of hernia.

Dr. John C. A. Gerster of New York presents an exhaustive review of the literature of Surgery of the Abdomen exclusive of Hernia. He particularly notes 100 or more cases of cutting off gastro-enterostomy for symptomatic ulcer of the stomach at the Mayo Clinic—meaning where no ulcer existed—Mayo holds that blocking of the pylorus is quite unnecessary as the results of simple gastro-enterostomy in cases where the operation is necessary and properly done, are good.

A rather extensive review of the literature on intestinal stasis is presented in opposition to the views of Lane that the large intestine is merely a sewage system, and quotes from Arthur Keith.

Dr. John G. Clark, of Philadelphia, reviews the literature on Gynecology and gives considerable space to cancer of the uterus and also to non-malignant conditions of the uterus. In this review Dr. Clark brings up to date the results of the Percy treatment and speaks of it with additional favor.

Dr. Clark calls attention to the now prevailing belief that displacements of the uterus are rarely due to trauma—a position we have held to for many years after a careful consideration of a considerable number of alleged traumatic cases of uterine displacements. Dr. Clark gives a detailed account of the Mayo operation for prolapse of the uterus which we have employed with great satisfaction in a considerable number of cases. This review presents much interesting matter that will be helpful reference.

A section on internal diseases is prepared by Dr. Alfred Steugel which includes a wide range of subjects which we particularly recommend to the reader.

THE KINETIC DRIVE; ITS PHENOMENA AND CONTROL

By George W. Crile, M.D., Professor of Surgery at the Western Reserve University. Octavo of 71 Pages, Illustrated. W. B. Saunders Company, 1916. Philadelphia and London.

The distinguished author in this little book presents a philosophy of life of great interest and importance. It is well known that what is gained in the span of younger life is mostly lost after fifty years of age on account of factors included in what Dr. Crile designates the "Kinetic Drive," conditions which exist in all stations of life.

Dr. Crile shows that the centers of energy reside in the brain and that in normal conditions the storage of energy during rest and sleep is equal to the expenditure during normal activity for the individual. If, however, infection, pain, injury, pregnancy, the emotions, exertion, stimulate the nerve centers, an excessive discharge of energy occurs attended with exhaustion of nerve centers and the production of acidosis; there are acute conditions which cause rise of temperature, more rapid respiration and heart action. In acute Kinetic Drive, the use of morphine lessens acidosis and preserves life. In this book, Dr. Crile shows that the emotions affect the internal secretions; the drive of adrenal secretions extending over a long period of time causes myocarditis, glycosuria and many symptoms of cardiovascular disease. Dr. Crile considers the effect of the emotions of fear, and anger, long continued mental strain particularly of a depressing character, loss of sleep, many psychic conditions, intoxications, over exertion; all these serve as a chronic Kinetic Drive which results in time in cardiac and vascular changes. This is certainly a fascinating theory and the experiments and arguments in its support seem convincing. We would particularly recommend this book to medical and scientific readers.

THE CLINICS OF JOHN B. MURPHY, M.D. AT MERCY HOSPITAL

Volume 3, Number 3 (June, 1916) Octavo of 176 Pages, 42 Illustrations. W. B. Saunders Company, 1916. Philadelphia and London. Price Per Year, Paper \$8.00, Cloth \$12.00.

This number contains twenty-four titles covering a considerable variety of subjects; one, a clinic on multiple sarcoma of the skin. There are three relating to the gall-bladder and pancreas and two on ulcer of the stomach and duodenum. An interesting clinic is given on post-operative ventral hernia. Of special interest is a discussion of neoplasms of both kidneys. The important question is diagnosis. It is quite apparent that an exploratory operation would be the only means of definitely determining the nature of the growth.

The results reached in cases of cancer of the rectum in late years gives new interest to the Kraske operation as performed at the Mayo Clinic, the mortality of which has been reduced to 8 per cent. with 35 per cent. recovery for a three-year period and 25 per cent. for a five-year period with even a promise of better results in early cases. According to the discussion by Murphy and Coffee in this number of Clinics, the operative mortality has been reduced at least one-half by the two stage plan of procedure.

OBSTETRICS NORMAL AND OPERATIVE

By George Peaslee Shears, B.S., M.D., Professor of Obstetrics and Attending Obstetrician at the New York Polyclinic Medical School and Hospital; Formerly Instructor in Obstetrics, Cornell University Medical College; Attending Obstetrician at the New York City Hospital; Senior Attending Obstetrician at the Misericordia Hospital. 745 Pages, 419 Illustrations. Published by J. B. Lippincott Company; Price \$6.00.

The results of the author's experience in practice and in teaching have been most ably set forth in this new volume, which is one of the most practical and helpful works before the profession today. The author states in the preface, that in his opinion most works on obstetrics contain too much irrelevant matter and too little about the practice of obstetrics. His purpose is to emphasize the important essentials of obstetrics and omit those subjects which are of historic or academic interest only, and those which everyone knows, in order to have space for those things in the Practice of Obstetrics which many do not seem to know; hence the omission of a section on Embryology, Anatomy and Menstruation.

The subject matter is well arranged, its teaching most direct and usable, while the many original photographs have a marked degree of excellence and a teaching quality which is unique, and deserve special commendation. The student and busy practitioner will find facts tersely put, statements clear and direct, and the price places the book within reach of every medical person.

ULTRA VIOLET LIGHT

By Means of the Alpine Sun Lamp. By Hugo Bach, M.D., Bad Elster, Saxony, Germany; Authorized Translation from the Ger-

man; 114 Pages, Illustrated. Paul B. Hoeber, New York, 1916, \$1.00 Net.

The author in his preface notes that study of this therapeutic method is not as yet fully concluded, although it has secured "an undisputed place in medicine," and puts forth the book to cover the present knowledge of this addition to the newer modes of treatment. He limits himself to the ultra violet rays as obtained by means of the Alpine Sun Lamp and apparatus designed by himself and other physicians of Marburg and Berlin.

A complete description of the apparatus is given, followed in Part II by a detailed account of the accepted technique and a brief discussion of the methods of production and properties of violet light. No discussion is made of the theory of action of violet rays.

The book has the characteristics of an advertisement of the "Alpine Sun Lamp," which impression is heightened in Part II by a collection of instances of cases of various diseases favorably influenced by treatment with this form of apparatus. In this discussion of treatment of various kinds of disease by the quartz lamp radiation very few statistics are given or other facts adduced to enable the reader to form any conclusion of the comparative value and results of the treatment. The conciseness of the book is a commendable feature.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

Third Series, Volume Thirty-seven. Containing the Papers Read Before the College from January, 1915 to December, 1915.

This volume contains biographical sketches of deceased members and many medical classics from the most famous physicians, surgeons and specialists of Philadelphia.

We regard these volumes as among the most valuable in our library.

CEREBELLAR ABSCESS

Its Etiology, Pathology, Diagnosis and Treatment Including Anatomy and Physiology of the Cerebellum by Friesner and Braun. Paul B. Hoeber, Publisher, New York.

This work gives a most excellent review of Anatomy and Physiology of the Cerebellum, and then takes up the question of Cerebellar Abscess from the standpoint of the Neuro-Otologist.

The complex tests of the labyrinth are carefully described, and their practical application discussed.

The differential diagnosis of Cerebellar Abscess is gone into thoroughly.

It is a book which covers nicely the bridge between Neurology and Otology.

DISEASES OF THE DIGESTIVE TRACT AND
THEIR TREATMENT

By A. Everett Austin, A.M., M.D., Former Professor of Physiological Chemistry at Tufts College, University of Virginia and University of Texas, Present Assistant Professor of Clinical Medicine, in Charge of Dietetics and Gastro-enterological Disease, Tufts College. With Eighty-five Illustrations, Including Ten Color Plates. C. V. Mosby Company, St. Louis, 1916.

The purpose of this book as set forth by the author in the preface, is to present in a direct and practical manner the facts pertaining to the digestive tract.

Chapters one and two relate to the anatomy and physiology of the digestive organs; chapters three and four to the examination of the patient and to the physical methods of examination of the digestive tract including radiological examination. A rather lengthy chapter is devoted to laboratory methods of study of stomach contents and offers a full account of the technic employed.

Chapter six relates to the examination of the feces. This is very interesting in that it includes the Pathologic Products of the intestinal Mucus Membrane and the Parasitic Contents.

Chapter seven and eight takes up Dietetics in Digestive Disorders and the Treatment of Digestive Disorders.

Part Second is devoted to Special Gastric Diseases, acute and chronic gastritis, gastric ulcer, cancer of the stomach, splachnoptosis and gastric neurosis.

Part Third: Special Intestinal Diseases. This includes a considerable number of the common diseases which daily come to the practitioner of internal diseases.

A review of this book presents in every part helpful suggestions of dietetic management and medical treatment of the common diseases of the gastro-intestinal tract while no claim is made of new discoveries or special methods of treatment but rather a direct and practical presentation of the main facts.

A GUIDE TO GYNECOLOGY IN GENERAL
PRACTICE

By Comyns Berkeley, M.A., M.D., M.C., (Cantab), F.R.C.P., (Lond.); Obstetric and Gynecological Surgeon to the Middlesex Hospital and Surgeon in Charge of its Military Hospital at Clacton-on-Sea; Surgeon to the Chelsea Hospital for Women; Senior Obstetric Surgeon to the City of London Lying-in-Hospital, Etc., and Victor Bonney, M.S., M.D., B.Sc. (London); F.R.C.S. (England), M.R.C.P., London; Assistant Obstetric and Gynecological Surgeon, Middlesex Hospital; Surgeon to the Chelsea Hospital

for Women, Etc. Oxford University Press, London, 1915.

This book was written for the use of the general practitioner and gives the best there is in British Gynecology. Every practitioner in addition to his work in the general field of medicine, must come of necessity into relations with diseases peculiar to women, many of which he must treat independent of the gynecologist. For the purpose of bringing to the mind of the practitioner the main facts in a logical way, the book of 452 pages—beautifully illustrated—is divided into five parts.

Part one relates to examination methods. Parts two and three consider the Significance of Symptoms and the Interpreting of Physical Signs, including pregnancy, abdominal tumors, uterine displacements, inflammations, swellings, etc.

Part four is devoted to the methods of medical treatment of gynecologic conditions. For surgical methods the reader is referred to works on operative treatment.

Part five is of particular interest and value from the fact that the Medico-Legal Aspects of Gynecology is presented. It is probable that comparatively few medical men are familiar with the legal relations of gynecologic practice and much discredit may come to the medical practitioner summoned to appear as an expert in certain sensational trials. The suggestions in this section will be very helpful to the physician in making proper examinations and in preparing his testimony for the purpose of aiding the court in its deliberations. Like all publications from the Oxford Press, the mechanical work is of high order and the indexing and cross indexing is carefully prepared.

THE MORTALITY FROM CANCER THROUGH-
OUT THE WORLD

By Frederick L. Hoffman, L.L.D., F.S.S., F.A.S.A., Statistician, The Prudential Insurance Company of America; Chairman, Committee on Statistics, American Society for the Control of Cancer; Member of American Association for Cancer Research; Associate Fellow, American Medical Association, American Academy of Medicine, Etc., Etc. The Prudential Press, Newark, N.J., 1916.

This is an extremely valuable contribution to our knowledge of cancer. The data used in compiling this work has been obtained from every source and gives an exemplification of the value of statistical methods in medicine. We are informed that the death record from cancer in Continental United States is 80,000 per annum and that the death rate is increasing 2.5 per cent. annually. The author presents the startling statement: "That the actual frequency of malignant disease throughout the civilized world has been ascertained to be much more of a menace to the welfare of mankind than has generally been assumed to be the case, and that in contrast to a marked decline in the general death rate, cancer

remains one of the few diseases actually and persistently on the increase in practically all of the countries and large cities for which trustworthy data are obtainable." Dr. Hoffman controverts some views expressed to show that the increase in cancer deaths is more apparent than real. It is said that more people live beyond the cancer age than formerly and that therefore there are more subjects for cancer development. But it is shown that cancer death rate at forty-five is higher today than in former years and so on. The question of race and occupation are studied statistically.

The immense collection of material upon which "observations and conclusions" are based, renders it impossible for us to more than refer to this in a general way. The second section of the work consists of chart statistics, includes every classification of location of growth, age and geographical distribution, year, per cent. to population, race and country.

SURGICAL AND GYNECOLOGICAL NURSING

By Edward Mason Parker, M.D., F.A.C.S., Surgeon to Providence Hospital, Washington, D. C., and Scott Dudley Breckenridge, M.D., F.A.C.S., Gynecologist to Providence Hospital, Washington, D. C., With 134 Illustrations in Text. J. B. Lippincott Company, Philadelphia and London. Price \$2.50 Net.

This book of 425 pages is particularly adapted to the pupil nurse in advanced standing, to the graduate nurse and the great body of hospital interns. It is quite possible that the young medical graduate who has received his appointment as a hospital intern will resent this reference to his needs. But it is nevertheless a fact that a graduate just fresh from his undergraduate course knows but little as to application of dressings, bandages and many other necessary things to do for the patient's comfort and advantage. This applies in even greater degree to recent nurse graduates from our so-called hospitals where greater attention is given to all sorts of services in which real nursing is a subsidiary function.

The chapter on bandaging gives a reasonably full account of the application of bandages in general also the chapter on the preparation of plaster Paris bandages and their application. The treatment and management of fractures is often lost by neglect on the part of interns and nurses in watching the condition of the retaining splints and bandages.

The proper administration of enema and rectal irrigation is apparently but little understood by hospital nurses, and unless the attending physician and surgeon personally supervise this important measure of treatment, many disappointments will follow.

In relation to bladder irrigation, in most of our smaller hospitals it is almost impossible to trust to the nurse in charge of the patient.

Part four relates to the patient. It is unfortunately true that interns and nurses are slow to observe im-

portant facts and report them to the attending physician or surgeon, not because of willful neglect but because of lack of training. There are also numerous observations in relation to the preparation of the patient for operation and the care after operation that contribute to safety and welfare that are overlooked for the same reason. We could extend these observations through the entire book. It is unfortunate that the great majority of hospitals have no libraries—especially in our smaller cities—to which nurses may resort for independent instruction. It may be said that pupil nurses rarely have the time from their multitudinous duties for such reference. It is fortunate that books like the one before us have been prepared for the use of conscientious nurses who are about to go out into private nursing for they will too soon find that doctors and patients give preference to the "practical nurse" who has learned in some way or another how to better care for the patient and add to her comfort. We most cordially recommend this book to the progressive nurse who desires to be in touch with scientific and practical nursing.

FIFTH ANNUAL REPORT OF THE UNIVERSITY HOSPITAL—ISSUED JANUARY 1, 1916

This report gives us a fair outline of the work in the University Hospital from July 1, 1914 to June 30, 1915. It is shown 2,362 clinical and private cases were admitted as house cases to all the services and classified as follows: Eye, Ear, Nose and Throat 606, Surgical 565, Obstetrical 207, Medical 443, Gynecological 145, Private 371, Dermatological 25, Surgical Out-Clinics 161, Medical Out-Clinics 215. We have not undertaken to analyze this report, only briefly noting the obstetrical list; less than one-half the number appear to be labor cases. We are pleased to note that the clinical material is increasing.

GENERAL EDUCATION BOARD—REPORT OF THE SECRETARY, 1914-1915

This report containing much valuable information in relation to educational matters in colleges and universities receiving aid from the Rockefeller fund.

UNITED STATES PUBLIC HEALTH SERVICE

Co-operative public health administration. An experiment in small communities. By Earl B. Phelps, professor of chemistry; Hygienic Laboratory. Reprint No. 222, Government Printing Office, Washington, D. C.

UNITED STATES PUBLIC HEALTH SERVICE

The summer care of infants. By Assistant Surgeon General W. C. Rucker and C. C. Pierce, surgeon U. S. Public Health Service. Supplement No. 16. Second edition February, 1916. Government Printing Office, Washington, D. C.

PERPETUATING PATENTS BY TRADE NAMES

The patent on aspirin (granted February 27, 1900) (acetylsalicylic acid), controlled by the Bayer Company, American representative of the Farbenfabriken of Elberfeld Company, will expire next year (1917). The Journal has previously stated that the grant of this patent was regrettable and worked injustice to American citizens. It is unnecessary again to go into the grounds for this statement; neither in the Farbenfabriken's home country, Germany, nor in any other country except in the United States, has a patent been granted for this product. Owing to their monopoly, the manufacturers have been able to exact a much higher price for acetylsalicylic acid, or aspirin, in this country, than elsewhere. Naturally, the Bayer Company, the American agents, view with disfavor the prospect of being compelled to share this rich field with competitors. The foregoing furnishes the answer to inquiries which have reached us from all over the country with regard to the campaign of publicity which the Bayer Company has inaugurated in the lay press. A presumably authentic and apparently candid exposition of the methods used and the motives behind the aspirin advertising is furnished in *Printers' Ink*:

"The manufacturers of aspirin are about to launch an extensive advertising campaign to clinch the market as far as possible before the expiration of their patent rights next year. * * * The purpose of the campaign is to identify the product with the trade-mark of the Bayer Company and to this extent hamper competition after the expiration of the patent."

The business of the Bayer Company, the article goes on to say, has been hurt by the sale of worthless or even harmful imitations put on the market by irresponsible and unauthorized persons when the present war stopped importations from Germany.

"The public knew aspirin, but did not know who made it [black face ours] * * * When the Bayer Company, Inc., took over the manufacture of aspirin in this country, the first steps were taken to identify the product with the firm who made it. * * * Of course, there are good reasons why the makers were loth to advertise the product or to exploit their trade mark. As every one knows, the advertising of a medical proposition is an extremely ticklish subject. * * * It is easy to make a misstep. Aspirin is one of those proprietary drugs that are extensively prescribed by physicians. If anything were done that might possibly associate this drug with the patent medicines that are in disfavor with the profession, the valuable influence and co-operation of thousands of doctors might be lost. It is believed that this knotty phase of the question is being answered in the present advertising. * * * Since nothing is mentioned about 'medicine,' 'cures' or 'ailments,' it is anticipated that there will be but

little objection to the copy. All that the advertising attempts to do is to link up the name 'Bayer' with aspirin. * * * The nearest the copy gets to medical talk is in this sentence in very small type at the bottom of the advertisement, The trade-mark 'Aspirin' (Reg. U. S. Patent Office) is a guarantee that the monoacetic acid ester of salicylic acid in these tablets is of the reliable Bayer manufacture."

From this it appears that, not content with seventeen years of monopoly, the aspirin people are attempting to retain a hold on the market in perpetuo by associating the name of the company with the trade name "aspirin." There can be no better time than the present, therefore, for the medical profession to substitute, for the non-descriptive name "aspirin," the descriptive and correct name acetylsalicylic acid.—*Journal of the American Medical Association*.

MEDICAL EDUCATION STATISTICS FOR 1916

The Journal of August 19, 1916, the annual Educational Number, contains statistics of medical colleges, students and graduates for the year ending June 30, 1916. There were 14,022 students studying medicine this year, 869 less than in 1915. These are divided into 13,121 in the non-sectarian colleges, 638 in the homeopathic colleges and 263 in the eclectic colleges.

There were 3,518 medical graduates this year, 18 less than in 1915, and 76 less than were graduated in 1914. The non-sectarian colleges had 3,274; the homeopathic had 166 and the eclectic had 78. This is the lowest number of graduates since 1890.

There are two colleges less than in 1915, the total now being 95, consisting of 82 non-sectarian, 10 homeopathic and 3 eclectic colleges.

Since 1904, 94 medical schools have been closed, 53 of which were merged into other medical schools and 41 became extinct. During the same time twenty-seven new colleges were organized, making a net reduction of 67 colleges. This reduction in the number of schools is not restricting the opportunities of students to study medicine but is insuring them a better training. The large over-supply of medical schools in this country is giving way to a more normal supply of better equipped colleges. Of the 94 colleges which closed, 69 had been rated in classes B and C by the Council on Medical Education of the American Medical Association. A large majority of these closed, therefore, were inferior colleges.

The marked reductions in the numbers of medical colleges, students and graduates is the reaction which would naturally follow the stupendous over-supply which this country possessed eleven years ago. There would be no possibility of a scarcity of physicians in this country for years to come, even though the number of medical schools were again reduced by half.

Women students constituted 4 per cent. of all students, and of all graduates, 3.7 per cent. were women.

Statistics show that college terms are being gradually lengthened. In 1901, 100 colleges had annual sessions of only 23 to 28 weeks each. Now no college has so short a session and about 93 per cent. have sessions of from 31 to 36 weeks. In 1904 only about 45 per cent. of all colleges had sessions of 31 or more weeks.

Tabulated statistics of college fees, including matriculation tuition and laboratory fees, show that 19 colleges charge \$100 or less for each student per year, 53 colleges charge between \$100 and \$175 per year, and 21 charge \$175 or more. Among the colleges charging fees of less than \$100 are several strong state university medical colleges. On the other hand, eight colleges listed by the Council in Class C charge fees from \$100 to \$175 per year for each student. Considering the fact that diplomas from Class C colleges are reported as not recognized as a qualification for a license by thirty-two state licensing boards, it would be poor economy to attend one of these colleges because of the slight difference in fees charged. In some cases it is a fact that in the same time and for even less money the student could attend one of the best equipped colleges, the diplomas of which are recognized in all states. Financial reports from 65 acceptable medical schools show an average actual expenditure for each student for one year of \$382, while each student paid on the average in fees only \$138. This shows that to furnish an adequate training medical schools must have more income than is derived from students' fees, in the form of either state aid or private endowment.

Of the 95 existing colleges, 84, or over 88 per cent., now require one or more years of work in a college of liberal arts for admission, and several others have announced the higher requirement to take effect in 1917. Of this number, 46 require for admission two or more years of collegiate work. That marked progress in this respect has been made is shown by the fact that in 1904 only 4 colleges (less than 3 per cent.) required any collegiate work for admission. Thirty-three state licensing boards have established the requirement for preliminary education of one or two years of premedical collegiate preparation; thereby supporting the better class of colleges which have adopted that standard. Seventeen of these require two years of collegiate work, the equivalent to that required by university medical schools for the six year combined course for the B.S. and M.D. degrees.

Of the 3,518 medical graduates in 1916, 948, or 26.9 per cent. (over one-fourth) were also graduates of colleges of liberal arts, as compared with 15.3 per cent. in 1910. This shows a decided improvement in the qualifications of those who are to practice medicine.

In recent years medical colleges have been greatly improved by the securing of endowments, new buildings, better equipped laboratories, better dispensary and hospital facilities and—most important—larger numbers of expert, full-time teachers. Improvements

have been particularly rapid since the creation by the American Medical Association of the Council on Medical Education, in 1904.

During January the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

E. R. Squibb and Sons:

Antistreptococcus serum, rheumaticus.

Lyster Brothers:

Lysters prepared casein diabetic flour.

NEW AND NON-OFFICIAL REMEDIES

Since publication of New and Non-official Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies:"

Calcium Phenolsulphonate, P. W. R.—A non-proprietary brand of calcium phenolsulphonate admitted to New and Non-official Remedies. Powers-Weightman-Rosengarten Co., Philadelphia, Pa.

Iron Lactate, Merck—A non-proprietary brand of ferrous lactate admitted to New and Non-official Remedies. Merck and Co., New York.

Sodium Phosphate, Monobasic, Merck—A non-proprietary brand of sodium acid phosphate admitted to New and Non-official Remedies. Merck and Co., New York.

Phloridzin, Merck—A non-proprietary brand of phloridzin admitted to New and Non-official Remedies. Merck and Co., New York.

Sulphanilic Acid, Merck—A non-proprietary brand of sulphanic acid admitted to New and Non-official Remedies. Merck and Co., New York.

Ergotin, Merck—A non-proprietary brand of extract of ergot, purified, admitted to New and Non-official Remedies. Merck and Co., New York.

Antithyroidin-Moebius Tablets, $\frac{3}{4}$ gr.—Each tablet contains antithyroidin-moebius $\frac{1}{4}$ gr. Merck and Co., New York.

Euquinine Tablets, 2 grs.—Each tablet contains euquinine 2 grains. Merck and Co., New York.

Euquinine Tablets, 5 grs.—Each tablet contains euquinine 5 grains. Merck and Co., New York.

Ferratin Tablets, $7\frac{1}{2}$ grs.—Each tablet contains ferratin $7\frac{1}{2}$ grains. Merck and Co., New York.

Stypticin Hypodermic Tablets, $\frac{3}{4}$ gr.—Each tablet contains stypticin $\frac{3}{4}$ grain. Merck and Co., New York.

Stypticin Sugar-Coated Tablets, $\frac{3}{4}$ gr.—Each tablet contains stypticin $\frac{3}{4}$ grain. Merck and Co., New York.

Stypticin Dental Tablets, $\frac{3}{4}$ gr.—Each tablet contains stypticin $\frac{3}{4}$ grain. Merck and Co., New York (Jour. A. M. A., Jan. 1, 1916, p. 31).

Dionin Tablets, $\frac{1}{4}$ gr.—Each tablet contains dionin $\frac{1}{4}$ grain. Merck and Co., New York.

Dionin Tablets, 1 gr.—Each tablet contains dionin 1 grain. Merck and Co., New York.

Theophyllin Sodium Acetate Tablets, 0.15 gm.—Each tablet contains theophyllin sodium acetate 0.15 gm. Merck and Co., New York.

Triphenin Tablets, 5 gr.—Each tablet contains triphenin 5 grains. Merck and Co., New York.

Tubes Tropacocaine Hydrochloride, Sterilized, 1 gr.—Each tube contains tropacocaine hydrochloride, 1 grain. Merck and Co., New York.

Veronal-Sodium Tablets, 5 gr.—Each tablet contains veronal-sodium 5 grains. Merck and Co., New York.

Iodipin Tablets, 3 min.—Each tablet contains iodipin 3 minims. Merck and Co., New York.

Apiol-Merck—A non-proprietary brand complying with the standards for apiol. Merck and Co., New York.

Creosote Carbonate-Merck—A non-proprietary brand complying with the standards for creosote carbonate. Merck and Co., New York.

Phenolphthalein-Merck—A non-proprietary brand complying with the standards for phenolphthalein. Merck and Co., New York.

Quinine Tannate-Merck—A non-proprietary brand complying with the standards for quinine tannate. Merck and Co., New York.

Sodium Nucleinate-Merck—A non-proprietary brand complying with the standards for sodium nucleate. Merck and Co., New York (Jour. A. M. A., Jan. 8, 1916, p. 117).

Swan's Typhoid Bacterin (No. 44) (Prophylactic)—Marketed in packages (hospital) of thirty-six vials and in packages (board of health) of seventy-two vials. Swan-Myers Co., Indianapolis, Ind. (Jour. A. M. A., Jan. 15, 1916, p. 191).

Radio-Rem, Outfit No. 5—An apparatus designed for the production of radioactive drinking water by the action of radium sulphate contained in terra cotta plates. It consists of two plates contained in 250 c.c. bottles; when the bottles are filled with water the two plates impart about 3.6 microcurie (10,000 Mache units) to 500 c.c. water daily. For action, uses and dosage refer to the article on radium in New and Non-official Remedies. Schieffelin and Co., New York (Jour. A. M. A., Jan. 15, 1916, p. 191).

Diphtheria Immunity Test (Schick Test)—This test is intended to determine those persons who have not in their blood an amount of diphtheria antitoxin sufficient to render them immune to diphtheria. The test is of special value for use in institutions and among groups of persons exposed to diphtheria, in order that it may be determined which individuals should be given an immunizing dose of diphtheria antitoxin. It is also of value in the diagnosis of other conditions simulating diphtheric infections.

Diphtheria Toxin Standardized (Schick Test)—

Marketed in sealed capillary tubes each containing a solution of one-fiftieth of a minimal lethal dose for guinea pigs of diphtheria toxin. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Jan. 15, 1916, p. 191).

Dimazon—Diacetylaminoazotoluene. An orange colored powder, insoluble in water but soluble in alcohol, chloroform, oils, fats and petrolatum. It does not stain the hands or cloth. It is said to be useful to promote the growth of epithelium in the treatment of burns, wounds, chronic ulcers, etc. Dimazon is marketed as follows:

Dimazon Oil—2 per cent.

Dimazon Ointment—2 per cent.

Dimazon Powder—5 per cent. Heilkraft Medical Co., Boston, Mass. (Jour. A. M. A., Jan. 22, 1916, p. 275).

Ichthalbin Tablets, 5 gr.—Each tablet contains ichthalbin 5 grains. Merck and Co., New York.

Triferrin Tablets, 5 gr.—Each tablet contains triferrin 5 grains. Merck and Co., New York.

Betanaphthol Benzoate-Roche—A non-proprietary brand complying with the standards for betanaphthol benzoate. Hoffmann-LaRoche Chemical Works, New York.

Betain Hydrochloride-Roche—A non-proprietary brand complying with the standards for betain hydrochloride. Hoffmann-LaRoche Chemical Works, New York (Jour. A. M. A., Jan. 22, 1916, p. 275).

Ergotinine Citrate-Roche—A non-proprietary brand complying with the standards for ergotinine citrate. Hoffmann-LaRoche Chemical Works, New York.

Homatropine Hydrochloride-Roche—A non-proprietary brand complying with the standards for homatropine hydrochloride. Hoffmann-LaRoche Chemical Works, New York.

Seiden Peptone-Roche (Silk Peptone)—A non-proprietary brand complying with the standards for silk peptone. Hoffmann-LaRoche Chemical Works, New York.

Theobromine and Sodium Acetate-Roche—A non-proprietary brand complying with the standards for theobromine sodium acetate. Hoffmann-LaRoche Chemical Works, New York (Jour. A. M. A., Jan. 29, 1916, p. 355).

PROPAGANDA FOR REFORM

Protonuclein and Protonuclein Beta—Eight years ago, the Council on Pharmacy and Chemistry published a painstaking and exhaustive report on Protonuclein and other products of Reed and Carnrick. This report showed conclusively that the whole theory of nuclein therapy was a tissue of speculation, into whose texture are woven only a few slender threads of fact. Now the Council reaffirms its former action with regard to Protonuclein. The objections to Protonuclein apply with equal force to Pro-

tonuclein Beta, said to be Protonuclein mixed with equal amounts of nucleoplasm and protoplasm of the spleen. In view of the lack of evidence the claims made for Protonuclein Beta are unwarranted. The Council, therefore, reports that it is ineligible for New and Non-official Remedies (Jour. A. M. A., Jan. 1, 1916, p. 38 and 48).

The Composition of Liquir Petrolatum—As naphthene hydrocarbons predominate in Russian crude petroleum and paraffin hydrocarbons in many of most American crude petroleum, it was assumed that the petrolatums derived from these sources differed from each other in like manner. While both the naphthenes and paraffins are chemically inert, some unexplained therapeutic superiority has been asserted to reside in Russian liquid petrolatum. Benjamin T. Brooks, of the Mellon Institute, explains that most so-called "mineral oils" used for therapeutic purposes contain no paraffin hydrocarbons whatever and that, regardless of the source of the crude petroleum, the fraction which constitutes the liquid petrolatum is composed essentially of naphthenes and polynaphthenes (Jour. A. M. A., Jan. 1, 1916), p. 38).

Stuart's Calcium Wafer Compound—The A. M. A. Chemical Laboratory reports that Stuart's Calcium Wafers Compound, consists essentially of calcium sulphide and aloes or aloin. Like other so-called blood purifiers, it is essentially a cathartic (Jour. A. M. A., Jan. 1, 1916, p. 51).

Hydropsin—According to the Ernst Bischoff Co., Inc., Hydropsin is the juice of digitalis, squill, European birch, juniper and knot weed, dialyzed and physiologically standardized. The Council on Pharmacy and Chemistry reports that the composition claimed for Hydropsin brands it as an irrational mixture in which potent drugs are combined with, and more or less covered up by, others that are obsolete and inefficient. The name, instead of indicating its composition, suggests diseases in which it may be thoughtlessly and indiscriminately used. The claim that the danger of toxic or cumulative action has been removed, if accepted by physicians, tends to uncritical use with possible disastrous results (Jour. A. M. A., Jan. 8, 1916, p. 135).

Digitalysatum—Digitalysatum, according to the Ernst Bischoff Co., Inc., is the dialyzed juice of fresh digitalis physiologically standardized and containing 12 per cent. alcohol. Sterisol-Digitalysatum appears to be the dialysate without alcohol diluted with equal parts of physiologic salt solution. The preparations are advertised with claims which imply superiority to all other digitalis preparations. The Council on Pharmacy and Chemistry holds that attempts to create the impression that digitalysatum possesses all the virtues of digitalis without its chief disadvantage are to be condemned as likely to lead to incautious use of the preparation. The Council therefore declared digitalysatum ineligible for New and Non-official Remedies (Jour. A. M. A., Jan. 8, 1916, p. 135).

So-called Secretin Preparations—At the request of

the Council on Pharmacy and Chemistry Professor A. J. Carlson of the University of Chicago has studied the action of secretin when administered by mouth or directly into the intestine and also investigated the secretin content of certain alleged secretin preparations. Carlson and his co-workers, like all previous investigators, found that secretin, when given by mouth or introduced even in enormous doses directly into the intestine, is entirely inactive. Further, they were unable to demonstrate the presence of secretin in samples of Secretogen and another supposed secretin preparation (Duodenum) bought on the open market, except that one bottle was found which contained a little secretin. Carlson and his co-workers conclude that there is as yet no reliable evidence that lack of secretin is a primary or important factor in any disease and that, should this be established, secretin therapy, to be effective, must be intravenous. The Council endorsed the work of Professor Carlson (Jour. A. M. A., Jan. 15, 1916, p. 178 and 208).

Tiger-Bone Therapy and "Clinical Experience"—In China the administration of powdered tiger-bone is, or was, a favorite form of treatment of supposed cardiac weakness. Since many patients have recovered after taking tiger-bone and no one has proved that they might not have died had they failed to take it, "clinical experience" stands back of the treatment. Not satisfied with the assertion of the dealers regarding the genuineness of the drug the conscientious Chinese physician subject the tiger-bone to a kind of physiologic standardization. He offers the bone to a dog! If it is an ox-bone—a frequent form of substitution—the dog will seize and eagerly gnaw it, whereas, according to the teachings of Chinese pharmacognosy, if it is a tiger-bone the dog will depart hurriedly with his tail between his legs. Much of our so-called clinical experience is not much better than that of the Chinese "clinical" evidence for tiger-bone therapy. Also, many physicians are wont to accept the statement of drug dealers without even making an attempt to check the claimed identity of the advertised remedy (Jour. A. M. A., Jan. 15, 1916, p. 197).

Mixed Antityphoid and Antiparatyphoid Inoculation—The use of any mixed vaccine is to be looked on askance. The simultaneous inoculation against typhoid, paratyphoid A and paratyphoid B needs further study in many directions. Reason and judgment at present would seem to approve the idea of using a mixed vaccine for the typhoid and paratyphoid infections. If a practical method of using this mixed vaccine can be devised, it seems to promise results (Jour. A. M. A., Jan. 15, 1916, p. 193).

Fulton's Compounds—A "Bulletin" sent out by the promoters of Fulton's Renal Compound and Fulton's Diabetic Compound gives an account of the alleged good results of the treatment in the case of a Mr. J. J. Pennepacker. The columns of a local newspaper announce the amputation of this man's leg for diabetes (Jour. A. M. A., Jan. 29, 1916, p. 373).

Strontium Bromide—The official bromide contains

about two-thirds as much bromide as is contained in potassium bromide and about three-fifths as much as that contained in sodium bromide. Hence it may be expected that the bromide action from strontium bromide will be much less than that of either potassium bromide or sodium bromide (Jour. A. M. A., Jan. 29, 1916, p. 376).

Strontium Salicylate not Superior to Sodium Salicylate—In a series of carefully controlled trials, carried out in the Lakeside Hospital, Cleveland, M. A. Blankenhorn shows that strontium salicylate possesses no advantages over sodium salicylate as regards either therapeutic efficiency or freedom from undesirable by-effects. The salicyl content of strontium salicylate is about four-fifths that of sodium salicylate. This smaller salicylate content may have contributed to the notion that strontium salicylate is less likely to cause salicylism. This notion may have also arisen from the fact that the more expensive preparations are likely to be given in smaller doses than the cheaper sodium salicylate. That the strontium salt of salicylic acid has no advantages over the sodium salt, has also been pointed out in the report of the Council on Pharmacy and Chemistry on Rheumalgine (Jour. A. M. A., Jan. 29, 1916, p. 331 and 362).

THE ROCKEFELLER FOUNDATION AND PUBLIC HEALTH

From the Lancet-Clinic, July 8, 1916.

As was to be expected, the trustees of Johns Hopkins University have promptly accepted the offer of the Rockefeller Foundation to establish a School of Hygiene and Public Health in connection with that seat of learning. The University of Pennsylvania had hoped to be designated as the beneficiary of the Rockefeller Foundation; for it is now admitted with chagrin that the just completed triple merger of the Medico-Chirurgical, the Jefferson Medical and the University of Pennsylvania School of Medicine was arranged for the purpose of deciding the Foundation in favor of Philadelphia. It is known that the Western Reserve and Columbia are also keenly disappointed. The very fact that spirited rivalry for the honor has been manifest is in itself a gratifying sign that the interest in education along the lines of preventive medicine is increasing throughout the land.

The selection of Baltimore for the location of the school will mean much to the South, which is admittedly somewhat backward in matters of disease prevention, always excepting Louisiana. But the establishment of the School of Hygiene and Public Health is of nation-wide importance. The entire country has been singularly laggard in the establishment of schools of preventive medicine. No great university in the country has made adequate provision for high class laboratories for the study of sanitary chemistry, protozoology, epidemiology, industrial hygiene, etc. The universities of New York, Philadelphia and Chicago have done com-

paratively little to further such a course. In point of fact, foreign countries, excepting England and Germany, have accomplished little along this line about which to boast.

COMING MEETINGS

The Southeastern Iowa Medical Society will hold their annual meeting at Muscatine, October 19th. Dr. E. F. LaForce, of Burlington, is the president of the society.

The Tri-State Medical Society will hold its twenty-fourth annual meeting at Kansas City, October 26-28 under the presidency of Dr. A. B. Middleton, of Pontiac, Ill. The preliminary program shows the Iowa membership to be represented by J. W. Shuman, Sioux City and Frank A. Ely, Des Moines.

SOCIETY PROCEEDINGS

The Marion County Medical Society met at Knoxville, September 21st. The morning session was devoted to business. The program for the afternoon was as follows:

Care and Treatment of Patients at the State Hospital for Inebriates—J. R. Wright, Knoxville.

Dietetic Management of Constipation—J. T. Strawn, Des Moines.

Paper—J. M. Weiss, Knoxville.

Acute Intestinal Troubles—A. E. Reiter, Melcher.

At the meeting of the Muscatine County Medical Society held at Hotel Muscatine, September 21st, Dr. C. P. Howard, of Iowa City, was the guest of the society and spoke most interestingly of his work at the Canadian base hospital in the war zone.

A large attendance marked the opening fall meeting of the Polk County Medical Society held September 26th at the Savery, and much interest was manifested in the two excellent papers read.

Dr. Julius S. Weingart discussed the Mis-treatment of Syphilis.

The Doctor first discussed the necessity of proper treatment in this disease, calling attention to the fact that the late, incurable lesions of the arteries and of the nervous system, are, as statistics amply prove, prevented by thorough treatment. He spoke of the three aims in anti-syphilitic therapy, namely, to cure existing symptoms, to render the patient non-infectious, and to prevent relapses and late manifestations, and insisted that treatment which aims only at the first or second of these, is insufficient.

The great importance of early diagnosis was emphasized, and the essayist stated that every genital ulcer, no matter what its clinical appearance, should be suspected until search for the spirochaeta pallida had proved negative.

While recognizing the importance and usefulness of the newer anti-syphilitic remedies, he deplored the

over-confidence which many physicians have in salvarsan, and insisted that neither mercury or the iodides should be neglected nor the period of treatment shortened.

The subject of the paper read by Dr. John H. Peck was Progress in Tuberculosis. His conclusions along this line were that there have been very few striking developments in the various phases of tuberculosis during the past few years. What has been accomplished is more in the way of giving emphasis to physicians and to the laity to already well known facts and methods, rather than of demonstrating anything new.

The fundamental thought in our consideration of the epidemiology of tuberculosis must be directed toward the child and to his family and home surroundings. More and more we are coming to agree with Baldwin that childhood is the time of infection; that adults rarely contract a fresh infection; that tuberculous disease is primarily the result of lowered resistance.

In the diagnostic field, more time is being devoted to obtaining the patient's history, past and present, which usually throws a vivid light upon the whole question of his general condition. Roentgenologists are coming to realize that the part the X-ray plays in diagnosis, although a valuable one is not the most important; the X-ray simply gives a certain amount of additional information and that it can never take the place of older and well tried methods of diagnosis. The subcutaneous tuberculin test, gives far greater information regarding the location and activity of the disease than does either the X-ray or the complement fixation test.

In the discussion of treatment there is nothing especially new. Some interest has been aroused by the application of chemotherapy to tuberculosis as suggested by the Japanese investigators. Artificial pneumothorax seemed to be applicable to only a comparatively small percentage of cases, and very few are permanently benefitted. Tuberculin is coming to be more used in non-pulmonary forms of tuberculosis, especially in cervical adenitis, and possibly somewhat less in phthisis. Climate plays but a small role in treatment and proper care is vastly more important.

The lack of interest by physicians in the Iowa Association for the Prevention of Tuberculosis is deprecated, and attention called to the fact that as the burden of anti-tuberculosis work falls upon the physician, he should make use of this state wide organization. This association furnishes the necessary machinery for an active campaign and all this is for progress.

At the meeting of the Van Buren County Medical Society held October 5th at Masonic Hall, Farmington, a large representation of the society was present; the most excellent program in charge of the Ft. Madison Medical Society was:

Auto Intoxication—F. C. Roberts.

Feeding in Typhoid Fever—M. L. Bishoff.

Nephritic Accidents—V. L. Doering.

Report of an Obstetrical Case—I. N. Traverse.

Iritis and Complications—R. S. Reimers.

Medicine, Business and Organization—J. R. Walker.

On September 5th a good attendance marked the opening of the 1916-'17 course of the Wapello County Medical Society.

Dr. F. W. Mills gave the first paper on "Fractures of the Bones of the Face." The various bones going to form the face were treated of separately, noting that a result must be nearly cosmetically perfect to be satisfactory in any of them. Naturally the various means of holding the fragments of a broken lower jaw were described—external moulded splints, intra-dental splints and wires; the assistance of a dentist may be of great value. Depressed fractures of the superior maxilla may be replaced by drilling into the antrum so as to insert an instrument as a lever to pry outward the depressed portion.

Dr. A. O. Williams' subject was "First Aid in Head Injuries." As the treatment may vary according to the severity, it is important to make as accurate a diagnosis as possible and yet it is very difficult to be certain early in head injuries, so one should make a diagnosis guardedly. Examine facies, pupils, condition of tone of limbs carefully. If shock is sure, keep prone and protect from cold. Hemorrhage must be controlled at once; it may be unwise to shave scalp immediately at place of accident. There seemed to be some difference of opinion between the essayist and those discussing the paper, as to the shaving of the scalp and placing of sutures; the final consensus of opinion seemed to be in favor of shaving and the placing of few, if any sutures in scalp wounds, so that drainage might be sure. Where unconsciousness exceeds one-half hour, a guarded prognosis should be given; place the patient in a dark, quiet room and give ergot, bromides and calomel.

Wapello County Medical Society Meeting of Sept. 18

Dr. Murdock Bannister discussed Intra-cranial Hemorrhage, due to injury without fracture, bringing out among others the following points:

Causes—blows on head or chin, falls on feet; may be extradural, subdural or in the substance of the brain.

First symptoms those of concussion, later of compression. Patient may be stunned, come to, walk home, then later pass into unconsciousness; latter symptoms, due to pressure accumulating from slow bleeding. Memory of events just preceding accident may be effaced. Pathology, if concussion, not clear, shaking alone, does not explain; may be microscopic contusion or hemorrhage; cell degeneration has been found. Usual treatment of rest, etc., are to be given. Operation indicated if focal symptoms are clear. Differential diagnosis from other causes of coma was then entered into.

Dr. S. A. Spilman's paper treated of Intra-cranial Hemorrhage with fractures. Statistics show about

2 per cent. of all fractures are cranial; two-thirds of all vault fractures extend to base; course of blood and symptoms due to hemorrhage, vary according to the fossa or region affected. A point of differentiation between a suture and a linear fracture is that one can wipe the blood clean from the former.

Fractures due to puncture may be complicated by infections due to material carried in. Symptoms of concussion and compression were brought out. A clear fluid escaping from the ears or a wound may be cerebral fluid if seen early, while if late it may be serum from clotted blood. The writer questioned whether in many cases operations were not done too early before symptoms made conditions clear.

Trephining should be done if it seems clear there is injury to the inner table. Warmth is important in the care of such patients. E. T. E.

The Webster County Medical Society meets at Fort Dodge every Tuesday evening. At the October 3rd meeting Dr. J. F. Studebaker, of Ft. Dodge, gave a very interesting review of the work at Dr. Cabot's Clinic. At the October 10th meeting the subject of the paper read by Dr. A. A. Schultz, Ft. Dodge, was Differential Diagnosis of Kidney Lesions. The program for the remaining October meetings will be as follows:

October 17—Medical Clinic 1:30 to 6:00 P. M. by the physicians of Ft. Dodge and vicinity; 7:30 P. M., The Present Status of Vaccine Therapy, Daniel J. Glomset, Des Moines.

October 24—Diagnosis and Treatment of Pathological Conditions in the Puerperum, Geo. Gibson.

October 31—Differential Diagnosis and Treatment of Middle Ear and Labyrinthian Diseases, Loren M. Martin.

CONFEDERATION OF COUNTY MEDICAL SOCIETIES

The "Birthday Party" of the Confederation of County Medical Societies held at Freeport, Ill., September 26-27 was an unqualified success. The registration showed a large representation from Illinois, Wisconsin and northeastern Iowa. The program was of more than usual interest. Among the guests were Dr. E. O. Dudley and Dr. E. Wilson Andrews of Northwestern University; Dr. E. Starr Judd of the Mayo Clinic; Dr. B. W. Sippy, of Rush Medical College and Dr. W. A. Evans, ex-health officer of Chicago. The state medical societies were represented by their presidents; Dr. Louis Jermain, of Milwaukee; Dr. W. L. Noble, of Chicago, and Dr. J. F. Herrick, of Ottumwa. Since the inception of the organization in July, its growth has been such as to warrant a change in name—the organization will henceforth be known as the Tri-State District Medical Societies, and the next meeting will be held in Dubuque. The officers elected were: President, W. B. Peck, Freeport; first vice-president, Wm. E. Parks, Rockford; second vice-president, Arthur C.

Helm, Beloit; third vice-president, C. A. McGuire, Dubuque; secretary-treasurer, N. C. Phillips, Freeport.

An elaborate banquet for the doctors and their ladies at the Masonic Temple with Dr. E. Wilson Andrews, of Northwestern University, as toastmaster, followed by a ball, closed the session.

DAVIS COUNTY CHILD WELFARE ASSOCIATION

Following in the footsteps of the Baby Health Conference as organized under the auspices of the Iowa State Fair and Exposition, Davis county has sanctioned the state movement by recently organizing a Child Welfare Association for that county. Dr. Clara L. Cronk, of Bloomfield, who has served as one of the judges in the Iowa State Baby Health Conference, was largely instrumental in advancing the local movement among the mothers of Davis county and in bringing the movement to fruition.

The value of having a baby health association in the various counties of the state cannot be too greatly emphasized or over-estimated, for after all has been said and done, the future of this state and nation, depends entirely on the present generation of babies and the countless millions yet unborn.

IOWA CLINICAL MEDICAL SOCIETY

The second meeting of the Iowa Clinical Medical Society was held at Sioux City September 2nd at Hotel West, Dr. Granville N. Ryan, president, in the chair. The members present were: G. N. Ryan and J. S. Weingart, Des Moines; C. E. Van Epps, Iowa City; C. A. Waterbury, and G. McConnell, Waterloo; E. A. Merritt, Council Bluffs; J. W. Shuman, E. M. Williams and W. G. Rowley, Sioux City.

After the business session the clinical history of several cases bearing upon focal infections and the use of vaccines were presented briefly by Dr. Shuman. They were discussed at length by all present and the attitude assumed concerning the use of vaccines was distinctly pessimistic, although it was admitted that in some instances much benefit was derived. If the patient did not improve within a few days after the removal of a focus it was stated by several that there was probably another focus or other foci that had been overlooked.

The chief value of vaccines was held to be as a prophylactic, there was no doubt that used as such much good had been obtained.

The histories of two cases of exophthalmic goitre were presented, also, by Dr. Shuman. Were discussed by Merritt, Van Epps, McConnell, Waterbury and Shuman. Both cases gave a history of typhoid fever.

The trial of the roentgen ray was suggested before resorting to surgical procedures, it to be given in massive doses at intervals of three weeks.

Dr. Williams reviewed several cases shown by him in the morning.

1. A fourteen year old girl with peculiar knee symptoms.

2. A case of pellagra in a woman of about forty-five in which marked mental symptoms preceded all skin lesions. At the beginning of the neurotic symptoms the teeth had been in a very bad condition accompanied by severe gastric disturbances. For several years has eaten little else than commercial "prepared foods." At present no mental disturbances but the typical skin lesions are evident.

3. Exophthalmic goitre in a girl about twenty-two, following typhoid fever.

4. A woman of about forty who had presented typical symptoms of cerebral tumor. These cleared up, till at present the patient appears to be normal.

G. W. McC.

THE OMAHA MEETING OF THE MISSOURI VALLEY MEDICAL SOCIETY

The Missouri Valley Medical Society met at Hotel Fontenelle on Thursday and Friday, September 21st and 22nd. This was the twenty-ninth annual meeting. The attendance at this meeting was the usual number, but the special feature of the meeting was the fact that nearly every paper was forthcoming at the proper time, and the meeting was busy from the first session until the close of the last session about six o'clock.

The papers before the general session were of a general high character, but very few that could be spoken of in any special manner.

The address by the president, Dr. John P. Lord, Omaha, was appropriate and of very considerable interest. The Doctor called special attention to various things that go for public welfare and general public health.

The address on Surgery by Dr. J. N. Jackson, Kansas City, was of unusual interest and helpful in considering the question of intestinal obstruction, yet the facts set forth have been generally accepted, and the particular merit lay in the fact that the Doctor in a very clear and distinct way, brought to the attention of the audience, things perhaps familiar to them but often forgotten. Unquestionably anyone who listened to the paper would feel that he was materially benefited by the suggestions.

The address on medicine by Dr. W. L. Bierring, Des Moines, entitled "Unsolved Problems in Hematology," was a very scientific discussion of a subject which belongs to the unsolved problems. Dr. Bierring was not able to give us any particularly definite opinion as to the blood studies, but they served to fortify views which the Doctor entertained in relation to the general facts particularly in relation to pernicious anemia. It is hardly to be expected that any remedy will be discovered that can meet the changes that occur in this disease. The Doctor referred to the influence of splenectomy upon pernicious anemia and while there seemed to be some evidence that good had been accomplished by this operative procedure, yet it is doubtful if we can ex-

pect this to become the procedure of choice in the treatment of this disease. Dr. Bierring's paper was by far the most scholarly paper presented at the meeting. While studies such as Dr. Bierring called attention to, may never lead to the discovery of methods of certain treatment, yet they have their value in explaining why treatment has not been more successful in the past.

The paper of Dr. Fred Moore, Des Moines, on "Acidosis in Children" was interesting and suggestive and created the feeling that Dr. Moore was deeply interested in working out scientific problems in medicine.

Dr. O. W. Hopkins, Chicago, chief surgeon of the C. & N. W. Ry., read a paper on "First Aid to the Injured," which brought out the general plan adopted by the Northwestern Railway Company in caring for their injured before the doctor reaches them. In relation to this question of first aid in the industries and in railroad transportation, the essential problem is to get the injured person to the doctor either at the dressing station or the hospital in the briefest period possible, and it is quite unreasonable to suppose that laymen will learn more of first aid than to apply a first aid package or in case of hemorrhage, a pressure appliance, and hasten the patient to the place where facilities for proper treatment are at once at hand. Much time is wasted in discussing questions that are entirely impracticable when the main proposition is an entirely simple one of taking the patient to a place of safety.

Dr. Robert H. Babcock, Chicago, presented an interesting discussion of Bronchial Asthma. The Doctor brought out interesting questions in relation to anaphylaxis or sensitization to a foreign protein. If the views presented by the doctor can be shown to be true, then the question of protein diet in certain individuals will be of very great importance, and the influence of certain pollen which have a certain protein content bear in an interesting way on certain forms of bronchial asthma, and we have still with us the interesting questions in relation to focal infections in developing asthma. Discussions like Dr. Babcock's are helpful in a general way in measuring the limits of our knowledge on some of these subjects, and it helps us in satisfying our minds as to conditions that may bring about asthmatic attacks without perhaps being helpful to us in the way of treatment and cure.

The next meeting of the society will be held at Keokuk under the presidency of Dr. C. R. Woodson, St. Joseph.
D. S. F.

MARRIAGES

Dr. Percy B. Battey, to Miss Sara H. Hillary, both of Independence, September 7th.

Dr. Earl C. Kepler, of Palmer, to Miss Christine Shimon, of Pocahontas, September 7th.

Dr. H. F. Kiesling, of Algona, to Miss Helen Walters, of Iowa City, in September.

Dr. Colin G. Thomas, of Monticello, to Miss Eloise K. Brainerd, of Iowa City, September 30th.

Dr. K. L. Johnston, of Oskaloosa, to Miss Alma Franzeir, of Anamosa, September 20th.

BIRTHS

Dr. and Mrs. Paul F. Guernsey, of Bloomfield, a daughter, September 19th.

Dr. and Mrs. Guy E. Clift, of Des Moines, a daughter, September 25th.

Dr. and Mrs. Arthur Downing, of Des Moines, a son, September 19th.

Dr. and Mrs. Russell Doolittle, of Des Moines, a son, September 30th.

DEATHS

Elbert Augustus Ainsworth, M.D., age sixty-seven; Syracuse University College of Medicine, 1874; a practitioner at West Union for thirty-four years; died at his home in West Union August 31st.

Oliver H. P. Shoemaker, M.D., age sixty-eight; Eclectic Medical College, Cincinnati, 1871; died suddenly at his home in Des Moines from heart disease, September 11th.

David Strock, M.D., age seventy-five; University of Missouri School of Medicine, 1875; a veteran of the Civil War; formerly a member of the Iowa State Medical Society; for thirty-five years a practicing physician at Waukon, state oil inspector for his district; died at the home of his son in Waukon September 2nd from arteriosclerosis.

John George Weinland, M.D., age fifty; Beaumont Hospital Medical College 1892; member of Dallas-Guthrie County and Iowa State Medical Societies; formerly a practitioner at Martelle, later at Dallas Center; died at his home in Dallas Center from pernicious anemia after a lingering illness August 31st.

CHANGES OF LOCATION

Dr. T. C. Cooper, formerly of Luther, has located at Ogden.

Dr. J. T. Grayston, of Hazelton, has sold his practice to Dr. J. C. Donnell, of Ionia.

Dr. A. H. Chilson, of Hampton, has purchased the practice of Dr. E. A. Hoefer, of Grafton. Dr. Hoefer goes to Kansas City where he will continue the practice of his profession.

Dr. J. F. Auner, of Waverly, who has been doing post graduate work at Rush Medical College and also in New York City, has located in Des Moines where he will confine his practice to skin diseases, X-ray and radium treatment.

MEDICAL NEWS NOTES

Dr. Daniel Franklin, of Audubon, has gone to Boston where he will take a post graduate course at the Medical School of Harvard University.

Chester Johnson, the twenty months old son of Dr. and Mrs. C. H. Johnson, of Cherokee, won first prize in sixty entries at the Inter-state Fair held at Sioux City in September.

Drs. Joseph and Grace Jerger, of Waterloo, have gone on a trip to the Orient. Dr. Joseph Jerger will study in the hospitals at Sidney, Australia, and the Russian hospital at Vladivostak.

At the meeting of the Medical Society of the Missouri Valley held at Omaha in September, Dr. C. R. Woodson, of St. Joe, was elected president; Dr. C. B. Hickenlooper, of Winterset, vice-president; Dr. Chas. Wood Fassett, Kansas City, re-elected secretary, and Dr. O. C. Gebhart, St. Joseph, was elected treasurer.

HOSPITAL NOTES

The new Mary Greeley Memorial Hospital was formally dedicated to the use of the city of Ames, Sunday, September 24th. On this occasion Capt. W. M. Greeley, of Ames, presented to the city council a warranty deed to the building and lots free from incumbrances and a check for \$3,000 to be used towards furnishings.

This hospital erected at a cost of \$80,000 with a capacity for thirty beds, a building complete in every respect, has been presented to the city of Ames without any reservations, whatsoever, with the agreement that the city maintain and support the hospital in a creditable manner. Capt. Greeley reserves the right to appoint the board of directors during his life time. The present board are: L. C. Tilden, A. H. Munn, George Judisch, L. M. Bosworth, C. L. Siverly and A. B. Maxwell. Attending the dedicatory services of Capt. Greeley's magnificent gift in memory of his wife, Mary Victoria Greeley, were prominent physicians and others from different parts of the state. Dr. R. A. Pearson, president of Iowa State College, delivered the address of acceptance.

Ames is to be congratulated in having among her pioneer citizens a man of such generosity and large heartedness as Capt. Wallace M. Greeley.

A REAL CONDITION

Members of the Iowa State Medical Society, do you read the Advertising Section of your Journal? Are you aware that it is an important part of your Journal? Advertisers are PAYING for the privilege of bringing their products to your attention. They are all honest advertisers worthy of your patronage, and the larger that patronage is, the better your Journal will be. To secure advertising contracts, your business manager must assure the advertiser that he will receive returns on his invest-

ment. Are you doing your part to verify his assertion? Do you always mention the Journal when you order?

Read Bulletin No. 10, advertising page xvi of this issue. The high cost of living has at last asserted itself in connection with the publication of this Journal. The bulletin states the absolute facts as to cost in the publishing of next year's Journal. Which method shall we pursue? You can help make the third method obtain. Will you?

WITH OUR ADVERTISERS

The attention of the affiliated members of the Iowa State Medical Society is called to the ethical conduct of the Hygeia Hospital, where the non-secret treatment for narcotism, as given to the medical profession through the Journal of the A. M. A., is used—with the highest per cent. of fixed results.

This treatment, in addition to separating the user from his habit, dissociates the habit from the mind and body of the individual, thus obliterating the craving. The treatment is of short duration; the discomfort minimized.

On entrance, covering all ordinary expenses, a fixed charge is made, which is moderate considering the service rendered in the individual case, and the permanency of the results.

Those interested should write for reprints and general range of prices.

HALF A CENTURY'S PROGRESS

October, 1916, points an epoch in the history of Parke, Davis & Co. The house was founded in 1866—just fifty years ago this month—largely upon the optimism of three or four determined men, backed by a capital that would seem insignificant today. There was nothing in its unpretentious origin to foretell the success of after years. And by success we mean not merely material prosperity, but also that broader and more enduring success that is based upon good-will and confidence.

Manufacturing pharmacy was then a crude, imperfect art. Bacteriology, pharmacology and biological pharmacy were as yet unborn. There were no curative sera or vaccines in those days. Prophylaxis was in its infancy. Standardization was unknown.

Fifty years have wrought marvelous changes in means and methods for the treatment of human ills. The materia medica has been amplified beyond the dreams of the earlier investigators. Knowledge of pathology has immensely broadened. The empiricism of the past has given way to rational therapeutics, and medicine is taking its rightful place among the sciences.

In all these forward movements Parke, Davis & Co. have had some part—notably as discoverers of new vegetable drugs, as inventors of new chemical compounds, as pathfinders and producers in the field of biological manufacture, as investigators in original

research, as pioneers in both chemical and physiological standardization.

The past half century, as we have intimated, has been remarkable in its contributions to the newer materia medica. What will the next fifty years bring forward? Time alone can write the answer. Ours is a progressive age. The science of medicine has not reached its highest development. The physician's armamentarium will be further enlarged and fortified. New remedial agents will come into being. Many existing products will be improved. And with the fulfillment of these conditions, Parke Davis & Co. (if we may judge the future by the past) are certain to be identified.

Other things being equal it is the man who leads the well-balanced life who lasts the longest, whose work to the end is uniformly the best, he who neither over-works nor over-plays, neither over-eats, over-drinks nor over-sleeps, he who maintains a standard of simple healthy diet in moderation, who offsets mental work with physical recreation, who is as honest with his own body as he is with his own business. When success comes to such an one his physical and mental condition is such that he can enjoy in peace of mind and contentment of body the fruits of his labors.

The regulations of U. S. Public Health Service state: "It is the duty of officers to maintain their physical as well as their professional fitness. To this end they shall be allowed time for recreation and study whenever their official duties will permit." If the government regards it as essential that its sanitary experts shall be safeguarded in this way, is it not equally important to every citizen that he similarly maintain a high standard of physical integrity?

DO YOU KNOW THAT

Today is always the best day to clean up?

Fresh air, food, rest—these three combat tuberculosis?

An efficient health officer is a good community investment?

Plague is a disease of rodents?

The United States Public Health Service has trapped 615,744 rodents in New Orleans in the past eighteen months?

Open air is the best spring tonic?

Typhoid fever is a disease peculiar to man?

Measles kills over 11,000 American children annually?

There has not been a single case of yellow fever in the United States since 1905?

—U. S. Public Health Service.

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THE PROPOSED MEDICAL DEPARTMENT*

JOHNSON BRIGHAM, State Librarian

I am able to report only slight progress during the last biennial period toward the creation of a medical department. The proposed department is, in my judgment, of so much importance to the state and the future of the medical profession in Iowa, that a re-statement of the progress made toward that end, and of the necessary means to that end, transcends, for the time being, any other report I have to make.

Many years ago, acting under instruction from the board, I made an attempt at a collection of medical works which should be of real service to the profession, using the works then in the library as a nucleus.

With a very small appropriation for the purchase of books and compelled to respond to the pressing needs of the law and general library, I have had little money left for the purchase of medical works, and, as a consequence, few additions have latterly been made to the nucleus of the proposed medical library.

Several years ago, the state library board directed the librarian to take counsel with the Polk County Medical Society and procure from that society a recommendation as to the kind of books which would be most helpful to the profession. This was done, and a committee from that society recommended two long sets, one of which—the proceedings of the London Pathological Society from Volume 1 (1848), to Volume 58 (1907), was purchased. The later volumes and current volumes as issued will be bought as soon as funds are supplied for the purchase of medical works. The other set, "Virchow's Archives," (printed only in German), was at the time deemed too costly for purchase, and is now withdrawn from the market, owing to the war blockade. Later, full sets of the two leading medical periodicals in this country, the *Journal of the*

American Medical Association, and the *New York Medical Journal*, were bought in numbers and bound in volumes. These have been continued down to date.

Meantime, through the efforts and influence of the American Library Association, a system of inter-library loans had become general. A few scholarly physicians and surgeons in Iowa have since availed themselves of the system through the medium of the state library, and have been enabled to borrow for brief periods books and periodicals from the John Crerar Library, of Chicago, and from the Surgeon-General's Library, at Washington. In time, the cameragraph was invented, and the John Crerar Library was thus enabled to photograph at small expense and mail to me the desired pages of certain books too valuable, and periodicals too much in use, to be loaned outright.

What the Surgeon-General's Library and the John Crerar Library are able, within reasonable limitations, to do for the practitioners of the country, the state library of Iowa should be able to do for the physicians and surgeons of Iowa.

A study of the card-system of a leading surgeon of Des Moines, Dr. Oliver J. Fay—with the files made by his secretary of the photographed pages thus acquired—suggested a plan which, submitted to Judge Deemer, chairman of the book committee of the state library board, and to a committee of the State Medical Society, seemed so feasible that conferences were afterwards held by Judge Deemer and myself with Doctors Hill and Pearson, representing the State Medical Society, and a general plan of co-operation was agreed upon.

In anticipation of the creation of a medical department, the library board set apart as the nucleus of the proposed medical library—a room on the second floor of the historical building—opening into the general library, and requested the executive council to purchase steel book-stacks for the room. The council promptly ordered the stacks and same have been installed.

The custodians of the library of Drake Univer-

*From advance sheets of State Librarian Brigham's 1916 report to Governor Clarke.

sity's Medical School, recently closed, turned over to the state library a collection numbering about 1,400 medical works. Drs. Hill, Dorr, Criley, Fairchild, and others, have donated several hundred volumes. These, with those already in the library, make a strong nucleus for the proposed department.

The State Medical Society has for the past four years had a standing committee to co-operate with a standing committee of the state library board. After several conferences with this committee and an examination by the committee, of the room set apart for the medical library, including the shelving and the books placed upon the shelves in their order as classified, a detailed working agreement was reached by the two committees as to the best means for securing the desired end; namely: the creation of a medical library which shall ultimately prove as helpful to the physicians and surgeons of the state and to students of medicine and surgery as is the present law department to the courts, the bar, and students of the law.

My hope, shared by members of both committees mentioned, and by the State Medical Society, is that the state will make it possible for even the most remote physician and surgeon to avail himself of the resources of the library, both by the loan of books and by the photographing of pages of books and periodicals not subject to loan. The state is in possession of a cameragraph, purchased by the executive council in response to the request and recommendation of several departments of state, including the state library, thus facilitating the reproduction of pages as proposed.

The committee representing the State Medical Society joined with the state library board in asking the Thirty-Sixth General Assembly to create a relatively small book-fund for the proposed department, and—still more important—to provide the state library with a trained medical assistant who shall have the same personal supervision over his department as the curator of the historical department and the law librarian now have over their respective departments.

The State Medical Society, more in earnest than two years ago, will again unite with the state library board in urging the measure.

The proposed medical librarian, far from being a mere care-taker and book-handler, should be one who has the advantage of an education in medicine and surgery, and is familiar with the languages in which the literature of the profession finds expression. He should also be more or less familiar with library science, including the art of cataloging. The plan will fail unless a

salary is provided which will enable the librarian to offer to such an expert a salary sufficient to induce him to take up the task with a purpose to make it the work of a life-time. I know of no other position in the library field which, from the very start, will call for quite as much of judgment and training, and can promise quite as much of substantial achievement.

The plan agreed upon promises to solve a problem which the state libraries that aim to cover the general field of library activities have thus far failed to solve. Iowa should lead the way to this desired end. I know, from the interest shown in "the Iowa idea," as outlined by me at a recent conference of state librarians in Washington, D. C., that other states will be eager to follow Iowa's lead.

The State Medical Society and the state library board would, I have no doubt, be extremely grateful to find, next January, that your excellency had deemed this project of sufficient importance to warrant an emphatic renewal of your recommendation in 1915, urging upon the Thirty-Seventh General Assembly the passage of an act, creating a medical department of the state library and the position of medical librarian.

The bill introduced in the last general assembly reads as follows:

Senate File No. 321—By Perkins. Appropriations.

A BILL

FOR AN ACT ESTABLISHING A MEDICAL DEPARTMENT OF THE STATE LIBRARY, TO PROVIDE FOR THE CATALOGUING AND SHELVING OF BOOKS THEREOF, MAKING APPROPRIATION THEREFOR, AND PROVIDING FOR AN ASSISTANT LIBRARIAN THEREIN AND FIXING THE SALARY OF SUCH ASSISTANT.

Be it Enacted by the General Assembly of the State of Iowa:

Section 1. That a medical department be established in the state library, to be under the direction of the state librarian and under the control of the board of trustees of the state library and historical department, to which department shall be turned over all the medical and surgical works and periodicals now in the miscellaneous department of the state library, and all the medical and surgical works and periodicals already contributed, or to be contributed, to the state library, the same to be catalogued and shelved in suitable rooms in connection with the miscellaneous department of the state library, and made available for reference use by physicians and surgeons and students of medicine and surgery and kindred sciences, and to the general public.

Sec. 2. There shall be annually appropriated from any money in the state treasury not otherwise appropriated the sum of two thousand dollars (\$2,000)

for the use of the medical department of the state library, the money to be expended under the direction of the board of trustees of the state library and historical department, in the purchase of books and periodicals deemed necessary to the upbuilding of said department, and the purchase and transmission of material and information to the physicians and surgeons of the state.

Sec. 3. There shall be annually appropriated, from any money in the state treasury not otherwise appropriated, the sum of two thousand four hundred dollars (\$2,400) as a salary for an expert librarian trained in medicine and surgery and in the languages in which medical and surgical literature is most commonly written and published.

Sec. 4. No preference shall ever be given to any school or schools of medicine but all shall be treated alike; and books, periodicals and pamphlets shall be secured for any and every legally recognized school without discrimination.

IMPORTANCE OF MORE THOROUGH EXAMINATIONS IN DISEASES OF THE RECTUM AND COLON*

C. B. HICKENLOOPER, M. D., Winterset

The selection of this subject seemed desirable, because diseases of the rectum and colon enter so largely into the daily activities of the physician, and yet, as a rule, they receive but little consideration from the average general practitioner.

The purpose of this paper is not to discuss in detail the pathological conditions found in the lower bowel, nor to cite anything new, but merely to direct attention to some of the more important factors which often cause general systemic disturbances, and which should receive their share of consideration before making a diagnosis. My remarks, therefore, are directed more especially to the average physician in general practice.

Patients frequently come to the office and diagnose their own case as "piles," fissure, or constipation, as the case may be, and their diagnosis is too often accepted by the busy physician without any physical examination and the patient dismissed with a prescription for an astringent antiseptic in the form of an ointment or a suppository for local treatment, or a cathartic for the constipation.

There is a certain amount of repugnance to examinations of the rectum, but from the standpoint of fairness to ourselves, and to the public who entrust their physical welfare in our hands,

the man who is too refined or fastidious to make rectal examinations, has no place in medicine.

It may be that our teaching has been at fault. The teaching of this branch, more especially diseases of the rectum and anus, has heretofore been very much neglected in a great majority of our medical schools. The subject is usually dismissed with a very few lectures by a teacher of some other branch, and we are not taught the importance of diseases of the anus, rectum, and pelvic colon; yet, Hirschman states:

It has been estimated that one patient out of every seven is suffering from some disease, the relief of which would be assisted, or entirely accomplished, by the treatment of pathological conditions discovered only upon rectal examination. Many patients consult a physician, whose localized pain, swelling, hemorrhage, discharge, tenderness, irritation, or other symptoms, call attention at once to the anorectal region. Many other symptoms, however, of a more general character—such as disturbances of digestion, menstruation, and the functions of the urinary organs, as well as headache, backache, sciatica, anemia, and sometimes even asthma and acne vulgaris—are more remote evidences of diseases originating within the confines of the lower bowel.

More attention has been given to diseases of the colon, yet widely divergent views are entertained as to the true nature of some of them, the most notable of which is probably colitis. Whether it is of neurotic origin, or the neurosis is a result of the colitis, has been a subject for much discussion. I am in sympathy with the latter view, if for no better reason than the results obtained from the different methods of treating the malady. The treatment of colitis as of neurotic origin alone, rarely ever effects a permanent cure, while on the other hand, treating it as a local condition, good results are usually obtained.

Someone has said that "correct diagnosis is three-fourths of the treatment." I think there is no field to which this could be more forcibly applied than to diseases of the anus, rectum, and colon.

As to the number of patients affected, constipation, so-called, undoubtedly ranks first, and very little consideration is usually given to this symptom other than giving a drug or a combination of drugs for a cathartic, without giving much thought to the etiology, or whether it be constipation, obstipation, or fecal impaction.

The causes of constipation are numerous, the predisposing causes—such as age, sex, heredity, occupation, etc., are too well known to need comment here.

Among the most common exciting causes may

*Read before the Sixty-Fifth Annual Session of the Iowa State Medical Society, Davenport, May 10, 11, 12, 1916.

be mentioned dietetic error, neglect, drugs and medicines, colitis, sigmoiditis, and proctitis.

Under obstipation Gant gives the following causes as the most frequent and important:

Congenital deformities and displacements of the intestine, extraintestinal pressure, strictures, malignant and non-malignant neoplasms, foreign bodies, intestinal calculi, fecal impaction, adhesions and tumefactions, angulations, diverticula and rectocele, abnormal mesentery, volvulus, hernia, invagination and prolapse, splanchnoptosis and enteroptosis, paralytic ileus, dilatation of the intestine, enterospasm, obstruction by intestinal parasites, hypertrophy of O'Beirne's sphincter, the rectal valves, the levator ani, or the sphincter ani, deviated coccyx, and diseases of the rectum and anus such as hemorrhoids and anal fissure.

Fecal impaction is not uncommon. The most common locations are the rectum, pelvic colon, cecum, and sometimes the transverse colon, especially in cases of coloptosis.

The report of Doctor Reed's studies of intestinal stasis in relation to the etiology of epilepsy has been very interesting to me.

The importance of rectal examinations may be shown in the following cases:

Case 1. A merchant of thirty-two came to my office for examination January 14, 1914. Gave a history of gonorrhea at the age of sixteen and again at twenty; otherwise was in apparently good health up to about a year and a half ago when he began to have pain in the urethra with a urethral discharge of mucus, and constipation. The pain and discharge increased with constipation. If he passed one day without a bowel movement there would be a fecal impaction in the rectum which natural efforts would usually fail to expel. The impaction would always increase the pain and mucus in the urethra. Complained of sacral pains, sciatica, and pains in the groin, knees, and feet. Family history negative, except father's sister died of tuberculosis. Microscopic examination of the mucus discharge was negative. Physical examination revealed nothing except tenderness in the left iliac region. Rectal examination showed an ulcerative proctitis. Local treatment was instituted which cleared up the trouble with the exception of one large ulcer on the anterior wall of the rectum, which was later excised under local anesthesia with apparent recovery. No return of symptoms to date.

Case 2. A lady of twenty came to my office January 10, 1916. Gave a history of constipation nearly all her life. Had diffuse pain in pelvis nearly all of the time since she was fourteen or fifteen. Appendectomy two years ago gave no relief from the symptoms. An operation for the correction of a displacement of the uterus was later advised but not carried out. Physical examination revealed nothing except tenderness in the left iliac region and in the pelvis. The position of the uterus was normal. Examination through the rectum showed

a sigmoiditis. Local treatment was immediately begun, the patient advised in regard to her diet and exercise, with the result that she has no longer any pain in the pelvis and is recovering from the constipation.

Diarrhea is a symptom not met with so frequently as constipation, but usually induces greater systemic disturbances. A great many of the factors producing constipation, more especially the mechanical causes, may produce diarrhea. We may have as a cause, organic lesions of the alimentary canal—such as ulcers or inflammatory conditions, causing a general depression and constant irritation, favoring bacterial decomposition—or the diarrhea may be mainly functional so far as the bowel is concerned, but secondary to renal, hepatic, cardiac, vascular, gastric, pancreatic, or various central nervous or ganglionic lesions, or essential blood lesions as anemia, pernicious anemia and leukemia. Many other diseases and organic lesions may enter in the list of causative factors. The subject of diarrhea is of too much importance to discuss with credit at this time and will suffice to say that a most thorough physical, as well as local, examination is imperative in all cases of diarrhea, more especially in the obstinate cases.

Pruritis ani is a symptom frequently met with in general practice and usually receives slight attention other than some local application to allay the itching. It may be the result of uncleanness, or congestion from various causes, pathological discharges resulting from anal fissure, hemorrhoids, polipi, prolapse, stricture, ulceration, foreign bodies, inflammatory processes of the rectum, sigmoid, colon, or inflammation of the skin surrounding the anus, genito-urinary diseases, rheumatism, uricemia, tuberculosis, nephritis, diabetes, hepatitis, gout, or certain articles of diet. The patient should not be dismissed without a thorough physical examination.

During the past fifteen or twenty years the attention given to diverticula of the colon has been steadily growing. The most frequent locations of the diverticula are the sigmoid flexure, cecum, and splenic flexure or at the points where the fecal flow is retarded. The condition may be brought on by anything that would cause a weakening of the bowel wall. Various secondary pathological processes may occur in, or as a result of, these diverticula which Lynch enumerates as follows:

1. Infection of the general peritoneal cavity from thinning of the sac walls without perforation.
2. Acute or gangrenous inflammation of the sac—"diverticulitis."
3. Chronic proliferative inflammation with thick-

ening of the gut wall and subsequent stenosis of the bowel—"peridiverticulitis."

4. The formation of adhesions between the sigmoid loop and other viscera, in particular adhesions to (a) the small intestine; (b) the bladder.

5. Perforation of the diverticula giving rise to (a) acute general peritonitis; (b) local abscess; (c) submucous fistulae of the gut wall; (d) fistulous communication with other viscera, notably the bladder.

6. The lodgment of foreign bodies in the diverticula.

7. Chronic mesenteritis of the sigmoid loop.

8. Local chronic peritonitis.

9. Metastatic suppuration.

10. The secondary development of carcinoma.

11. Perforation into a hernial sac.

12. The formation of loose bodies in the peritoneal cavity.

Some of these pathological processes are of relatively small importance, being of but very occasional occurrence.

Restlessness, in children, without apparent cause, should, at least, suggest a careful search for "pin-worms."

Patients with general abdominal or epigastric pains, pain in the iliac, lumbar, or sacral regions, backache, pain in the hips and legs, in which cases the diagnosis is difficult, should not be dismissed without a rectal examination.

I was called to see a patient May 25, 1915,—a lady of forty-three—who was suffering from what she called "grip." She complained of aching in head, back, arms, legs, and of abdominal pains, constipation, and frequent urination. Fever of 103 F. and a high pulse rate. Physical examination revealed nothing. Analysis of the urine showed nothing except it was highly colored; not much sediment. Second day the fever was 101 F. at noon, and on the third day fever of 104 F. at 10 a. m. Examination of the blood showed no malarial organisms. The spleen was normal in size. On the fourth day her temperature was 103.4 F., with pain in the groins, hips, and legs. Local examination revealed an ischio-rectal abscess. Free incision allowed the escape of more than a half pint of pus. The cavity was drained with gauze and healed in three or four weeks. The notable thing in this case is the fact that all the pain was referred; there being no local pain whatever.

There are many other pathological processes which may affect the rectum and colon, equal in importance to the ones to which I have called attention, but, for the lack of time, will not be individually discussed at this time. Diseases of the lower bowel, the importance of which cannot be overestimated, are liable to progress more rapidly than diseases in any other portion of the body, and, though most amenable to treatment in their early stages, through carelessness and er-

rors in diagnosis more frequently become inoperable. Hence the importance of more thorough physical examinations and more efficiency in diagnosis of diseases of the rectum and colon.

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Discussion

Dr. Thomas F. Duhigg, Des Moines—In discussing the question under consideration, I can tell this audience only one thing about it, and that is a remedy for just one condition referred to by the essayist near the close of his paper. I recently stole this information from a colleague who is sitting here now. I had a case, the diagnosis of which was very simple, and I relied entirely upon the patient's own statement. He had pruritis ani, and I tried to relieve the condition by giving almost everything that anybody ever thought of. The man had at one time been a druggist, and he had tried most everything I suggested. Dr. Jaenicke of Clinton finally informed me that he had something that would cure or relieve pruritis ani in one hundred per cent. of cases: Tincture of benzoin (not compound but the plain tincture). I ordered it, and regret exceedingly that I can not report upon the results in the case, but it was recommended to me with such assurances that I feel it is worth while to mention it here.

Dr. S. A. Spilman, Ottumwa—I guess most of us have had some experience with cases of pruritis ani. In a few cases I have found that unsuspected hemorrhoids was the cause of the trouble, and I am inclined to think that in this case the condition would require something surgical.

Dr. J. W. Kime, Fort Dodge—I did not want to discuss this subject, but it seems to have resolved itself down to the question of pruritis ani. I wonder that there is not infinitely more pruritis ani than there is. This is a nasty subject to discuss and I dislike to speak of it, but when we remember how most individuals clean this portion of their anatomy after defecation, I must say that I cannot but wonder why there is not infinitely more pruritis ani than there is. Think of it—a little piece of toilet paper with two or three wipings intended to remove this material. Suppose this were on your hand; would you think for an instant of cleansing it in any such way as this? With any of this fecal material retained about the fissures of the anus, as it must always be retained, there is the most efficient pabulum for the growth of bacteria, and they grow there in swarms of millions. The result is irritation and pruritis ani. Dr. Duhigg suggests tincture of benzoin. I would suggest a thorough cleansing with a cloth and water.

Dr. G. N. Ryan, Des Moines—I wish to take a moment of your time in saying that I think this paper is most timely, and we were especially pleased

when Dr. Hickenlooper stated that he would present it. The salient point of the paper is the necessity of making a very thorough examination, and it seems to me that examination with the proctoscope, which is invaluable to the general practitioner as well as to the specialist, should not be limited to the proctologist. This instrument, put up in most convenient form, can be connected with any electric light globe, and in going over the different portions of the state that I have had the pleasure of visiting, I have noticed that most places, even very small towns, now have electric light plants. It seems to me that if the general practitioners are to hold their positions of trust in the various localities and so serve their patients that they will not drift off to this, that or the other "opathist," they must make complete examinations and use the proctoscope, because it is an invaluable instrument. We are indebted to Dr. Hickenlooper for the able presentation of this paper, which is most timely and should receive serious consideration and study when it appears in the Journal. I wish to thank you, Dr. Hickenlooper.

Dr. F. J. Conroy, East Moline, Illinois—For the benefit of those who have not done much in the way of rectal examination, I simply want to say that they will be disappointed if they use a speculum instead of a proctoscope. There is a difference in the instruments.

Dr. Hickenlooper—Just a word in regard to the treatment with tincture of benzoin. It would probably take care of the cases due to uncleanness, but when due to other causes I do not believe it would cure, or do any more good than many other antiseptics. Good soap and water would probably do as well.

CONSERVATION IN GYNECOLOGY*

H. A. MINASSIAN, M.D., Des Moines

We are as a rule in the habit of thinking of woman as physically inferior to man, mainly because of her possessing the highly specialized organs of reproduction. The discomforts of her menstrual life, the dangers and agony of pregnancy and child-birth, and the many special diseases of the pelvic organs, constitute a distinct handicap. Nevertheless it is a matter of common knowledge that the enjoyment of good health and the physical and mental well-being of woman is essentially dependent upon the physiologic activity of these organs; that in normal menstruation and ovulation and conception is to be found the very fountain-head of her happiness. It is therefore a proposition requiring no proof that routine and consistent conservation or preservation of the several parts that combined form the

unit known as the female organs of reproduction, is morally and scientifically correct.

The discussion that follows is divided into two sub-sections:

1. Conservation through prophylaxis.
2. Conservation in surgical treatment.

1. There is a time when you and I can save a woman from gonorrheal endometritis, gonorrheal salpingitis, ovarian abscess, pelvic abscess, permanent sterility, and the dangers of an extensive major operation. When is that time? That time is when she presents herself with the symptom-complex of a specific urethritis. For in the female (as in the male) the primary seat of infection is in the urethra. Now if we fail at that critical time to recognize the significance of painful and frequent micturition and vesical tenesmus, and thus neglect immediate examination and prompt and effective treatment (bearding the lion in his den, as it were) the day of conservation is lost.

There is a day when you and I can save a woman from a possible puerperal infection, from future prolapsus of the vaginal walls, perhaps from future procidentia and other malpositions of the uterus, and from chronic vesical disturbances. That day is when her perineum is split open to permit the passage of a fetus. If we fail to immediately and effectively care for that violent trauma, the day of real conservation is lost. Perineal repair, months or years later, will only imperfectly remedy the damage.

There is a period when you and I may save a woman from future cancer of the uterus. That period is during the existence of a laceration of the cervix, of cervical erosion and glandular hypertrophy and degeneration. Appropriate surgical measures, such as cauterization of the eroded area with the thermo-cautery, or a trachelorrhaphy, or even an amputation of the cervix, will perhaps save her, and this is conservation indeed. It is conservation in the truest sense of the word to do a complete hysterectomy even in borderline cases in that transitional period when the benign may be taking on the character of malignancy. In such cases the most radical surgery becomes the most conservative. For in the final analysis it is not what nor how much is cut that distinguishes conservative from destructive surgery, but the complete attainment of an end with the smallest sacrifice of functioning tissue compatible with the existing diseased conditions. This is the law of surgical conservation.

2. Gynecological operations are performed to save life, to prolong life, or to make life more comfortable. Of these three the last, namely, to

*Read before the Sixty-Fifth Annual Session of the Iowa State Medical Society, Davenport, May 10, 11, 12, 1916.

eliminate or alleviate distress or discomfort is the end sought in, by far, the largest number of cases. To accomplish this, the organ involved may be subjected to repair, correction of position, or removal. No part of the female pelvic organs is necessary for the maintenance of life. Hence any part or all may be removed without jeopardizing in any manner the life of the patient. Pelvic surgery does not entail great risk, it is not extra hazardous. Major operations are safer in the pelvis than in any other part of the body. Hence the temptation of unnecessary, mutilating and destructive surgery of these organs comes even to the most conscientious operator whose sole desire is to give the patient complete relief from pain and distress.

The factor that should influence the operator in deciding upon the problem of how conservative or how radical the operation should be in any given case, is the *patient's age*. Is she within or beyond the child-bearing period? That is the deciding factor. If the latter, the problem is much more difficult.

Let us assume that we have a patient within the child-bearing period; that she is the subject of chronic pelvic infection. The endometrium is infected, the tubes are infected and the lumen obliterated; the ovaries are buried in a mass of adhesions and perhaps infected. Shall we remove tubes, ovaries, and uterus to obtain a radical cure, or shall we follow a course more conservative? This concrete example will help us to an understanding of the merits and demerits of a conservative versus a radical operation.

At the outset of this argument, let it be conceded that in a certain class of cases of this character, the pathological changes are so profound, the destruction of organs so complete that conservatism is impossible. Let it be admitted further that in some cases the differentiation of diseased from normal tissue is very difficult or impossible, and to foretell the future of such tissue is beyond the knowledge of the surgeon. Let us not lose sight of the fundamental fact that even in inflammatory conditions of the type under discussion, with few exceptions only, operative or surgical treatment is indicated to save life, only rarely, oftener to prolong life, but most often to free the patient from pain. So to remove tubes, ovaries and uterus in such a case, to be sure, cures the disease, but with needless sacrifice. And what of the patient? She has been deprived of all that is distinctive and peculiar to her sex, her physiological equilibrium is roughly and suddenly upset with the loss of an internal secretory apparatus, the functions of ovulation,

menstruation and conception are gone; soon the external genitalia, the vaginal tract and mucous glands undergo atrophy and she becomes sexually incompetent. Therefore whenever it is possible to restore her health and yet conserve these organs in part or in full, we are duty-bound to do so in harmony with the highest principle of surgical art—not to destroy but to save.

Let us now consider the application of conservative surgical treatment individually—

1. Of the tubes,
2. The ovaries,
3. The uterus.

1. *The Tubes*—The most important step in the management of an acute inflammation of the Fallopian tubes is *not* to operate. When a diagnosis of acute salpingitis is made, the sign-posts point away from the operating table. We wait, the inflammation subsides and the patient recovers, perchance carrying infection within sealed tubes, which eventually become sterile. Or, on the other hand, the infection may progress into chronic salpingitis or pyosalpinx. Chronic salpingitis does not necessarily call for operation, although drainage is in many cases indicated. Pyosalpinx may be dealt with by drainage through the posterior fornix; or abdominal section and drainage, or removal of one or both tubes, providing, if possible, a patulous ostium at the uterine cornu for the admission of ova into the uterus. That this is not a useless step need hardly be emphasized when it is recalled that pregnancies have occurred when both tubes were ligated and removed for chronic salpingitis or pyosalpinx. Also when we remember how difficult and often impossible it is to sterilize a woman by ligation, section and removal of the Fallopian tubes. When infection has been disposed of, nature has the interesting habit of trying to re-establish continuity of lumen into the uterine cavity. The probability of future pregnancy in any given case may be uncertain or poor, yet the younger the patient the greater is the joy and happiness that even a small chance will give her.

2. *The Ovaries*—Ovarian disease is comparatively rare. No organ in the body has greater or as great resisting power against microbic invasion. The gonococcus and the staphylococcus rarely find a footing on ovarian tissue. Even when a tubal abscess involves the ovary through adhesions to such an extent as to spread out the ovary on the abscess wall—the so-called tubo-ovarian abscess—the ovarian parenchyma maintains its characteristics. Complete removal of the ovary is permissible only when it is the seat

of tuberculosis, clearly demonstrable septic infection, fibroma, cystoma, sarcoma and carcinoma. Graafian follicle cysts and corpus luteum cystomas never justify removal of an ovary. Puncturing such cysts or resection is all that is demanded or necessary. Even ovarian dermoids may be safely treated conservatively whenever so desired, provided that there is no evidence of malignancy on immediate examination of frozen section.

3. *The Uterus*—Inasmuch as the uterus is the conducting medium of infection to the adnexa, the endometrium would be considered as a seat of infection in the presence of adnexal disease. If the latter is so profound as to require complete removal of both tubes and both ovaries, then supravaginal hysterectomy may be advisable. Such a uterus being functionless and also a potential source of danger to the patient, its removal is usually indicated. Such radical surgery is necessary in but few cases. In by far the great majority, the ovaries may be saved in part or in whole, and if ovarian tissue is conserved, the uterus should be saved whenever possible.

In the treatment of fibroids of the uterus there is opportunity for conservation. Whenever it is possible to perform myomectomy, it should be the operation of choice, especially in younger patients. Undoubtedly it can be done much more often than is ordinarily practiced. In older women near or past the menopause, hysterectomy is the operation of choice.

I wish to conclude with the report of an interesting illustrative case.

Mrs. W. T. L., aged twenty-seven, was first seen by me on September 20, 1912. Ten weeks before, she had given birth to her first child. Labor had been normal, excepting a small perineal laceration. Evidence of pelvic infection had appeared before the end of the second week following labor. The succeeding history had been that of a particularly severe peritonitis. At my first visit the clinical manifestations and physical signs were those belonging to an acute stage of the disease. Marked diffuse abdominal distention, extreme tenderness and rigidity of the abdomen, rapid pulse, high temperature, anorexia, vomiting, and severe pelvic pain were some of the salient features. For the sake of brevity let me state at once that five days later I operated on her. Adhesions were extremely dense, resembling the chronic type of years' standing. Both tubes were filled with pus. Both ovaries were infected and degenerated. Both tubes were therefore ligated and removed. Apparently both ovaries which formed a part of the heterogenous mass representing the tubes were removed. There was no opportunity for intentional conservation. Nevertheless a small particle of firm pearl-gray tissue was seen under one of our ligatures, which was undoubt-

edly a bit of ovarian tissue. Patient made a good recovery following operation and four months later menstrual function was re-established. During the following three years she menstruated in a more or less erratic way and menorrhagias were common. The conclusion of her story is that she became pregnant last September and has had an uneventful period of gestation and is now ready for delivery. This case illustrates how under the most unfavorable conditions pregnancy may occur and even advance to full term. A small piece of ovary left behind saved for her the functions of menstruation, ovulation and conception and in a word conserved her womanhood when both tubes were ligated and removed, where only a bit of ovarian tissue was left in the pelvis, and where undoubtedly a vast amount of post-operative adhesions formed.

I am aware that the pelvic organs are not ruthlessly sacrificed today as they were ten or fifteen years ago; yet I am not sure that conservatism in pelvic surgery is as widely practical as it should be.

Discussion

Dr. C. E. Ruth, Des Moines—The question has been asked what special significance the ruthless removal of the organs had, and it is this suggestion that has prompted an inclination on my part to discuss the subject. I have been greatly interested in this paper, for I think it is a very timely one indeed.

I naturally think so because for the past twenty years I have done what I could along the very lines the Doctor has so well described. However, his opening remarks with reference to the prophylaxis struck me in rather a peculiar way. I could not help but question our ability to with certainty prevent, even if we were notified immediately of the first manifestation of a specific urethritis, the possibility of invasion of the uterine cavity, and consequently the sad train of sequelæ in the infection involving the tubes and the interior of the uterus. I wish the Doctor, if he has a specific which will positively arrest the extension of the gonococcus at this or any other stage, would let us know about it. The only prophylaxis that I know along this line is that prophylaxis which prevents infection in the first place. As to the puerperal infections and their possibilities, the cervical lacerations and the necessity for repair, I certainly feel like endorsing with all my energy the conclusions set forth by Dr. Minassian. One thing about that phase of the subject is this: That we have, I believe, very many more lacerations of the cervix with their great liability of ultimately producing carcinoma, than we realize. I believe that if we could keep most of our women quiet for ten days, absolutely so, we would not have separation of those rents that are of any considerable depth and that are practically always bilateral. You will notice little niches on the anterior and posterior lip marking the size of lacerations; but in those cases that do not unite, I believe it is our duty to inform the patients of the need for early repair. What the essayist has said about the pre-cancerous stage for operative procedures in the removal of what will

ultimately mean as a rule the horrible death of the woman from carcinoma of the uterus, I certainly fully endorse. What Dr. Minnasian has said with reference to the temptation to do too extensive operations, could not have been better expressed. Because a woman can live as the result of an operation, does not mean that the operation was justified by any means. Many others have been seen sad wrecks of woman who were too extensively operated upon in the years that have gone. During the last twenty years I have not, as I remember, entirely removed both ovaries of more than a couple of women that were under thirty-five years of age. The leaving of but a very small portion of one ovary, when not advisable to leave more, is certainly, as the Doctor has said, a very valuable thing for the patient. With many of us it is yet an open question as to how we shall deal with cases of salpingitis, and I was very glad indeed to hear Dr. Minnasian say that we should not deal with them at all in a surgical way in the acute stage and if due to gonorrhea. Nobody has yet seen a case of gonorrheal salpingitis die from that condition if it is left alone in the first few months of the attack. The chronic cases that are commencing to cause the patient suffering, not endangering life, but making them miserable all the time, do require operation. In these cases we should never ligate the tube, but should remove it entirely, excising its attachment to the uterus by removing a X-shaped piece from the uterine cornua and carefully close the space. This plan will prevent all possibility of extension of infection again from the uterine cavity into the abdomen. Regarding the interesting case described by the essayist, in which he removed both tubes and removed nearly all of both ovaries. Would it not have been just as well or even better, as it was not a gonorrheal infection, to have split the tubes longitudinally and freely right through the fimbria, allowing them to become everted, and put two drainage tubes down into the vagina? You never can choke a drainage that is double-tubed. Even a large single tube may choke, but never a double one, because if both calibers are choked then drainage will take place in the little interstices between the curving sides of the tubes. Would drainage not have enabled nature to do just as good a job, as to have done the more radical operation, and with less operative time and shock? I do not mean to criticize the plan the Doctor followed, but if we would remember in such a case to provide free drainage, wouldn't we put a less burden upon the patient? Would not that woman have a greater chance for a happy future, and also the increased possibilities of pregnancy?

Dr. J. N. Warren, Sioux City—The paper certainly is a very interesting one and has brought out many practical points. And one special point that has been emphasized is, I believe, particularly important and that is never to operate during the acute stage. Referring to what Dr. Ruth said about never operating on infective salpingitis, it is much more important to never operate in a puerperal infection. And it makes little difference as to

what the type of case is. For many years the principle of conservation of the ovary has been adopted in surgical treatment. As the Doctor has stated, it is a uniform experience that we seldom have the ovary involved, and often, when involved, certain portions of it may be retained. And when the ligation referred to fails, include all the ovary and the part that remains will be the germinal portion. You can very often save a part of the ovary when even the uterus and the Fallopian tubes are removed when the patient is past the acute period. So also we have been taught that even when necessary to remove an ovary entire, we may transplant a portion of it into the broad ligament or even in the horn of the uterus and often it will become germinated there. The essayist called attention to another point which may not be appreciated, and that is the so-called conservative operations upon the uterus, the dickering with it, which is not the thing to do; but that where the pathology is such that it becomes necessary, it is conservative surgery to remove the uterus and all the organs of the pelvis in order to get rid of the disease.

Dr. Frank M. Fuller, Keokuk—I did not expect to enter into the discussion of this excellent paper, but two weeks ago I had the honor to address one of our county societies on the subject of obstetrical accidents in relation to gynecology, and, as the essayist today has specifically pointed out, the opportunities that we have during the period of pregnancy and labor for conservative saving of the woman, and for that reason I have some thoughts I wish to present on this occasion. We too often think of gynecological affections as embodying a surgical condition. More recently we are having presented to us a medical gynecology. We have not yet reached the point when we realize that in doing that great branch of medical surgery with which all of us have more or less to do, viz., obstetrics, we are having on our hands the responsibility of seeing more potential gynecological lesions than in all the other branches of medicine combined. The essayist spoke of the perineum being torn and left unrepaired as a source of gynecological trouble. I believe it is the unrecognized damage to the pelvic floor and not the apparent damage to the perineum, which is giving us more gynecological work than all gonorrheal infections and everything else put together. Those of us who are practicing amongst a certain class of people very seldom see these gonorrheal lesions or the evidences of inflammatory and infectious conditions in tubes and ovaries. But in types of women in whom these things do not prevail, we do see the results of neglected obstetrical work, and I can not conceive why we go on year after year in our society and look over our programs with nothing on the subject of obstetrics, a branch of work we are all doing every day in the year. We leave this subject almost untouched, and yet in many cases of labor this great pelvic floor is stretched to a point not of breaking through the floor of the perineum, but to the point that the fibres are separated, with such effect upon the ner-

vous system that its functions are greatly disturbed, bringing on many ills we are called to treat, not from a surgical standpoint, but from the standpoint of the general practitioner and internist. And I want to leave with you just this one thought: A woman who has passed through labor, has not completed her labor until three months after she has been delivered and has been finally examined by the man who attended her in her labor. I honestly believe that if we will impress upon every one of our patients the necessity of coming to the office or returning to us at some place three months after labor for examination, we will save our patients an enormous amount of suffering and ourselves an unnecessary amount of work if we recognize the damage that has been done to the parturient canal and the pelvic floor at a time when gynecological repair can be made for the conservative saving of the woman in future years.

Dr. Minassian—I make this plea for conservation in surgical work in the pelvis, because I am convinced that surgeons in general are not as conservative in the surgical treatment of the female pelvic organs, as of the male organs of reproduction. The results of ruthless and reckless surgery in the pelvis, as well known, are unpleasant. Therefore it behooves us all to be very careful as to the extent to which we go in pelvic operations, lest we destroy the future happiness of these patients. The criticism made by Dr. Ruth with reference to the operation that was pursued in this case, was, I think, well taken. That work was done four years ago. If I were to manage a similar case now, I believe I should follow his suggestion—to open, incise and drain. With reference to a criticism made that in cases of acute gonorrheal salpingitis an operation should not be done, I wish to answer that this patient had been ill for nearly ten weeks, that during this time she had not shown any resistance, and that at the end of ten weeks' illness she was not progressing towards recovery. Therefore we were obliged to interfere, to open the abdomen and to take necessary measures to cure the patient.

METALLIC INJURY OF THE EYE OR THE CHEMICAL ACTION OF CERTAIN METALS UPON THE STRUCTURES OF THE EYE*

With Report of Case

JAY G. ROBERTS, M.D., Oskaloosa

The subject, injurious effects of various metallic poisons upon the structures of the eye, is given but little space in the text-books on ophthalmology. My own attention was directed to the subject by Dr. Geo. de Schweinitz in discussion of the case reported herewith. Upon a

review of the literature at my command, little was found in reference to the subject.

Siderosis or the staining of structures of the eye from oxide of iron, from retained particles of iron or steel, is of sufficiently common occurrence, while the more serious effects upon the deep structures of its chemical action such as shrinking of the vitreous with detachment of the retina is also a matter of more or less common knowledge to those who practice among iron workers.

Leber found that particles of copper placed in the eyes of rabbits gave rise to very serious reaction with the formation of purulent exudate within so short a time as twenty-four hours.

Hirschberg says a splinter of copper in the iris usually penetrates the lens but offers no difficulty to removal. This is not in accord with our experience. He says that copper in the vitreous usually causes suppuration but seldom chemical irritation, although the eye is frequently lost.

Case—Mr. C., age fifty-nine, boiler washer at railroad yards. In good health. Personal and family history negative except gonorrhœa and intemperance in early life.

In attempting to loosen a boiler plug of brass with a hammer a spicule of brass was broken from the plug striking him in the left eye. He was referred to me by Dr. Barringer, local surgeon for the M. & St. L., within an hour of the accident.

Examination—The eye appeared normal except for a slight redness near the outer sclero-corneal junction where a minute wound was discernable. Upon inspection with oblique illumination, a minute shining particle was imbedded in the iris well down in the filtration angle. Its nature having been determined, the use of the magnet was of course out of the question.

The patient was therefore sent to the Oskaloosa Hospital where two hours later an operation was undertaken for its removal. Under cocaine anesthesia the anterior chamber was entered with an iridectomy knife opposite the location of the body and an attempt made to remove it with iridectomy forceps. It eluded the grasp of the forceps for some time but was finally captured but found to have penetrated the iris and entered the lens. Because of its ragged tooth-like edges, it was so entangled in the tissues of the iris that each attempt to extract it dragged the iris with it. After repeated efforts to remove it from the iris, an iridectomy was done and the brass removed with the excised portion of iris. Because the injury to the lens made cataract inevitable, the lens was extracted through the enlarged corneal incision and the debris washed out with normal salt by means of our modification of the Lippincott irrigator. Atropine was instilled and the patient placed in bed.

Twenty-four hours later there was little reaction.

*Read before the Sixty-Fifth Annual Session of the Iowa State Medical Society, Davenport, May 10, 11, 12, 1916, Section Ophthalmology, Otology and Rhino-Laryngology.

The anterior chamber had reformed and patient could count fingers at several feet. Temperature normal. Patient had had no pain and had slept the entire night.

March 11—Eye perfectly comfortable but media hazy, vision reduced. Slight injection of conjunctiva.

March 12—Eye perfectly comfortable. Injection increased. No tenderness or discomfort. Tension minus. Vision, large objects only.

March 13—Eye still comfortable; no change in appearance.

March 14—No change except increased injection and vision reduced to light perception.

March 15—Tension still lower, vision nil. Absolutely no pain or tenderness.

The tension continued to diminish and signs of ocular degeneration, as turbidity of media, loss of light perception, continued. A clinical diagnosis of phthisis bulbi was made and the eye was removed on March 22nd, thirteen days after the injury. At no time was there any pain, pus in the anterior chamber or elsewhere any evidence of infection or the usual signs of a grave destructive inflammation of the structures of the eye.

In conversation with Dr. de Schweinitz at Waterloo, the history of this case was outlined to him. He suggested that the destruction of the eye might have been due to the chemical action of the brass and generously offered to look up Leber's reference to the subject upon his return to Philadelphia.

On May 19, 1915, the following letter was received from him.

Referring to our conversation in regard to your patient from whose iris you removed a piece of brass and the unusual phenomena which followed this injury, I have to say that I see that Leber does state that copper can produce an inflammation of the eye, even a purulent inflammation, purely by a chemical action. His elaborate work on the subject is entitled "Die Entstehung der Entzündung und die Wirkung der entzündungerregenden Schädlichkeiten," Leipzig, 1891.

As brass is an alloy of copper and zinc, this may best explain the conditions which you encountered. I think it would be very interesting to have microscopic examination made of this eyeball. With many pleasant recollections, etc., etc., I am,

Yours very truly,

G. de SCHWEINITZ.

May 27th, the specimen was sent to Dr. Dean with the request that he have it examined by the pathologist who did his eye work. The specimen was forwarded to Dr. Albert whose report was as follows:

Dear Doctor: Have made a microscopic examination of the eye sent you by Dr. Roberts of Oskaloosa. I find that the gross specimen showed collapse most marked by depressions about the cornea. The cornea was somewhat opaque. On cutting the

eye in two, the fluid of the posterior chamber was distinctly cloudy; that of the anterior chamber was replaced by a whitish colored exudate which covered both the anterior and posterior surfaces of the iris as well as the ciliary body.

Microscopic examination indicated that this whitish colored exudate was fibrinous material. It was the same material that caused cloudiness of the fluid in the posterior chamber. In addition, there was some proliferation and desquamation of the endothelial cells lining the iris and ciliary body; also the accumulation of a number of polymorphonuclear leucocytes, plasma cells and young fibroblasts. The process is, therefore, essentially a non-suppurative fibrinous or plastic iridocyclitis with extension of the inflammation to surrounding tissues or as Dr. Roberts found, phthisis bulbi.

Very truly yours,

HENRY ALBERT.

Whether this case may be properly assigned to that class of injuries due to the chemical effects of metals in the eye, is of course debatable. In the author's opinion, the strongest evidence against such a conclusion is the very short time the metal was in the eye, less than four hours, Dr. de Schweinitz did not seem to consider this strong evidence against the diagnosis. That it was a most unusual outcome in view of the slight trauma, the absence of the usual signs of infection and of micro-organisms in the fluids and tissues of the eye as determined by the pathologist, must, we think, be admitted.

OSTEOMATA OF THE RETINA*

F. E. V. SNORE, M.D., F.A.C.S., Des Moines.

In announcing the title of this paper to the chairman of this section, I had entertained the belief that I had in my possession a perfect example of that rare condition known as osteomata of the choroid, but more careful examination of the specimen and more extended study leads me to the belief that the case I am about to present you is even more rare than that of osteoma of the choroid. It is, however, none the less an osteoma, but I believe it is an osteomata of the retina and not of the choroid, and with your permission I shall change the title to that of Osteomata of the Retina, and shall endeavor to show the correctness of the title.

The patient, Miss N., consulted me eight months ago for a painfully inflamed condition of the left eye of four days duration. She was thirty-eight years of age, single, born in Denmark, and was blind in the eye at birth; she was one of nine children and a twin; her parents

*Read before the Sixty-Fifth Annual Session of the Iowa State Medical Society, Section Ophthalmology, Otology and Rhinology, Davenport, May 10, 11, 12, 1916.

were hard working people, and are enjoying good health in the seventies. Two children died in infancy from contagious diseases—the others enjoy good health. Upon examination, I discovered ciliary tenderness; a markedly lowered tension “tonometer was not used,” pupil normal in size and reacting to light; while a snowy white floating body occupied the pupillary space. I was unable to detect any point of hardness in the eye-ball. As the eye was a useless and dangerous member, I advised its removal, and the following day enucleated it. The nerve presented such an unusual enlargement that I feared malignancy, until the microscope revealed the harmlessness of its condition. A section of the eye shows a bony growth occupying two-thirds of the circumference of the eye-ball, forming a complete shell posteriorly over the optic disc, and extending anteriorly within an eighth to a quarter of an inch of the ciliary body. No traces of the retina remain, but the ciliary body, iris and cornea remain largely unchanged. The lens and capsule occupied the pupillary space as a shrunken, degenerated snow-white body. They were removed from the specimen for examination.

The vitreous is a shrunken, opaque mass, with points of varying degrees of density, suggesting fresh ossific centers but containing no osseous deposits; there were no evidences of hemorrhages having taken place. The eye-ball is about normal in size, without any evidence of solution of continuity at any point. The bony growth has completely displaced the retina and extends under the nerve sheath into the remains of the nerve fibres proper. The nerve fibres have become atrophied and replaced by fibrous tissue quite similar to the septæ separating the nerve bundles, with an infiltration of bony tissue. The pial and dural sheaths of the nerve, which are the continuation of the choroid and sclera, have become infiltrated and thickened by fibrous tissue, but no bony deposits are to be found. The subdural and sub-arachnoid spaces have become infiltrated with fibrous tissue and obliterated. The nerve sheath is many times thickened, and the nerve is somewhat enlarged. The changes in the sheath are apparently due to inflammatory changes and edema from the irritating presence and pressure of the bony growth. Although the pigmented epithelium of the choroid has largely disappeared, the lamina vitrea, chorio-capillaris and the layer of vessels have undergone no change. The bone has haversian canals, a marrow and cells.

It seems reasonable to conclude that in a specimen like this, with the choroid practically

unaltered after thirty-eight years, and the retina replaced by a bony tumor, with bony infiltration in the nerve fibres, we are dealing with an osteomata of the retina and not the choroid. The origin and nature of osteomata offer an inviting field for pathologists and especially is that true of this particular specimen. According to Adami, true osteomas may occur in connection with pre-existing bone, or apart and in other tissues; in the former case it is derived from the periosteum or may be within the bony substance and then originating from a misplaced area of epiphysal cartilage, or from the medulla. In all true osteomas there is a central growth and expansion, producing absorption of the original structure—there is no gradual and imperceptible transition. In the metaplastic ossification the alteration is usually the result of inflammatory processes, and following this there develops true bone, with haversian canals and a yellow or red marrow. Adami does not consider bones of the choroid as true osteomas. In the American Encyclopædia of Ophthalmology it is stated that plates of bone frequently occur in atrophied eyes, and rare cases have been reported where bony formation occurs before phthisis bulbi occurs. As a rule, the growth is very slow, although one case is recorded where choroidal ossification occurred two weeks after the injury, and one ten months after injury.

Ossification may take the form of bars united by bony ridges or small plates may form near the disc, or form large shells, supplanting the choroid. This authority adheres to the plausible theory that the bone develops from the fibrous exudate found in extensive choroiditis—the fibrous tissue replacing the chorio-capillary layer. Parsons believes the ossification is of the periosteal type; and the bone corpuscles that are found in this fibrous tissue may develop from the connective tissues; from the choroid stroma; or from the cells of the capillary walls. This is supposed to be the final stage of degeneration of the organized inflammatory deposits, and may include the cyclitic membrane; surround the lens—even penetrating its capsule; or may occupy the whole vitreous chamber. Zeigler believes many are malformations resulting from excessive growth or from inflammatory processes, such as osteophytes, exostoses and in part of the parastoses and disconnected osteomata (bone formation in lymph glands and lungs). Bony plates not infrequently found in the falx of the dura, and which have a normal bone marrow are misplaced portions of the skeleton. Remak and Van Duyse also consider them as dermoids; Van Duyse believing they originated in adhesions be-

tween the amnion and surface of the eye-ball which is not covered by the lids prior to the fourth foetal month. The adhesion between the amnion and eye-ball is later drawn out into a cord and finally breaks in two—its points of attachment to the eye remaining as a dermoid tumor.

By some authorities osteomata start from the bony wall of the orbit and usually from the frontal bone; they may, however, start from one of the accessory sinuses and afterwards enter the orbital contents through erosion. Metastases does not appear to be considered a possible origin. This specimen could hardly be considered as originating from the bony wall of the orbit as no suggestion of erosion of the eye-ball is seen. It cannot be considered as inflammatory in origin as a retinitis of any extent could not exist for thirty-eight years without involving the choroid. It would seem as though it belonged to the dermoid class, as the eye was blind at birth and the theory of Van Duyse the more probable in this particular case.

I am indebted to Dr. Glomset for a confirmation of the bone and nerve findings and to Dr. Weingart for a confirmation of the choroidal examination.

Discussion

Dr. Lee Weber, Davenport—These cases are medical curiosities and no one except the man with a large dispensary clinic sees very many of them. Besides this specimen I have seen one case which occurred a number of years ago in an eye which had long been inflamed and sensitive with recurrent attacks of indocyclitis and which after inoculation was found to contain a plate of bone about one-half inch in diameter which was saucer-shaped and one-eighth inch thick with a central perforation through which the optic nerve passed. It was situated in the choroid at the posterior pole of the eye, accurately fitting against the sclerotic.

Dr. A. W. Elmer, Davenport—Dr. Shore's paper was of special interest to me on account of a case which I had some years ago, in which there was an osseous invasion of the choroid due to irritation of a foreign body which had been in the eye for sixteen years prior to the time of my first seeing it. There was a history of an injury as far back as this, and the eye had remained perfectly quiet in the interim. At the time of my first visit the eye was injected, tension lowered, media hazy with considerable pain, and tenderness in the ciliary region. Fearing sympathetic trouble, it was advised that the eye be removed, and enucleation followed in a few days. On examination it was found that nearly one-fourth of the choroid was invaded by a bony deposit, very much in description like the cases of Dr. Shore. There was a small opening about 2mm in diameter at the side of the optic nerve entrance, and what remained of a scale of steel which had entered the eyeball, was lying near this opening upon

the choroid. A more careful investigation, such as Dr. Shore gave his case, would have been profitable, but I did not then have the benefit of his paper.

INTERMENSTRUAL PAIN*

W. C. NEWELL, M. D., Ottumwa

Our interpretation of this subject is any pain in the pelvic region, or a reflex from that source occurring between the cessation of one flow and the establishment of the next, including twenty-one or twenty-eight days. While the subject covers a great field, we will try to sum it up as briefly as possible. To understand this subject it is necessary to review the development of the pelvic organs in the female, their blood supply, also their nerve supply. * * *

The first that we are confronted with is the blood supply of the uterus and appendages. The vessels are the uterine, ovarian and funicular, all of which are paired. The uterine artery, a branch of the internal iliac, runs from its origin in a downward direction along the pelvic wall as far as the base of the broad ligament; then, crossing horizontally towards the cervix uteri in front of the ureter, it gives off some small vaginal and vesical branches, and runs upwards in a serpentine course to the side of the body of the uterus. These, of course, anastomose across the middle line with their fellows on the opposite side, the larger branch forming the "arterial circle of Huguier." The uterine veins are of very large size, and on leaving the uterus, form a plexus in the muscular tissue of the broad ligaments, at length joining a trunk which runs side by side with the artery to end in the internal iliac vein.

The ovarian artery, arising from the aorta, crosses the common iliac artery into the broad ligament by the ligamentum inlundibulo-pelvicum, which extends to the outer end of the oviduct. The tubal, which runs along the lower border of the oviduct, where the peritoneal layers of the tube separate, and sends numerous branches to it. The ovarian proper, a large serpentine vessel which gives off many large branches into the hilum of the gland, and then passes to the angle of the uterus, where it ends by anastomosing with the uterine and funicular arteries.

The ovarian veins, very largely developed about the hilum of the ovary, appears as a plexus in the broad ligament, and, reaching the margin of the plexus, assume a pampiniform arrangement around the artery. The right ends in the vena cava, the left in the renal vein.

The funicular artery is an offset of the vesical.

*Read before the Wapello County Medical Society, March 21, 1916.

It joins the round ligament at the internal ring, and divides into ascending and descending branches, the former running backwards in the substance of the ligament as far as the angle of the uterus, where it communicates with the ovarian and uterine; the latter passing with the round ligament through the inguinal canal into the labium, there anastomosing with the external pudic. It is accompanied by its vein.

Lymphatics—The cervix is very richly supplied with lymphatics, as is also the side and upper part of the uterus near the junction with the Fallopian tube.

Nerves—The nerves of the uterus are derived from the third and fourth sacral; the hypogastric plexus of the sympathetic, and from the renal plexus, which also supplies the ovaries and oviduct.

We have gone very extensively into the development and anatomy of the genito-urinary organs, because it seems to me that to have a proper understanding of intermenstrual pain, we must first have at least a knowledge of nerve and blood supply, of the organs chiefly involved.

In examining these patients we should (1) Have the patient's statement. (2) age. (3) Civil state. (4) Family record. (5) Occupation and habits. (6) General health. (7) Condition of bowels and bladder. (8) History. (9) Child-bearing record—this including normal labor, abortion, prematures and instrumental or Cesarean section. (10) Pain; its location, character and severity. (11) Presence of discharges—character, amount and kind. (12) Particular symptoms.

It is not a good practice to begin asking questions, let the patient explain the condition in her own words, as it enables the examiner to become better acquainted with her, and gives him a clear idea of the chief symptoms.

The age of the patient is important, as she is liable to certain diseases at particular periods in her life. We hear very little of pelvic pains before the beginning of menstruation. At puberty the girl is in a transitory stage; she is neither a child or yet a woman; her reproductive organs are undergoing a rapid development, and the appearance of the menstrual flow indicates that ovulation is being established, and that she is passing into the child-bearing period of her life.

Irregularities or pain in connection with the function of the organs of generation, at this period, have a far different significance than like disturbances later on, when the woman has reached maturity. There is more distress and pain proceeding the flow than later on, especially in women who have been pregnant.

The menopause occurs at a period in the life of woman during which atrophic changes are taking place in the organs of generation. These changes come about slowly, covering a period of two or three years, and while acute diseases occur, it may be said that this is the malignant time of a woman's life, yet she should pass through it, as a rule, without any special symptoms. It is a great mistake, when a woman at this stage of life comes complaining to you, to say to her "this is just the change of life, you will be all right in two or three years." She may give a history of indefinite pelvic pains, or reflex disturbances referred to the head or legs and yet be suffering pretty serious disease. Many lives are lost because the attending physician fails to realize that any disturbance at this time of life may be the "Hand writing on the wall" of an insidious malignant disease.

The social state as well as the environment, has an important bearing on the diagnosis. We expect to find very little pain attributable to the uterus, tubes or ovaries, in the unmarried, but there are many exceptions and we find cystic ovaries, tubes infected with tuberculous or possibly a mixed infection. Later in life she is more liable to fibroids of the uterus and to cirrhotic changes in the ovaries. In the married woman we must think of the possible existence of lesion due to gonorrhea, sepsis, or traumatism following labor or abortions; malpositions, etc. Many symptoms in women are due either directly or indirectly to their occupation and habits, and it is most important, therefore, that the history should record the habits and occupation. Often we can relieve the pelvic pain, dull and dragging in character, that so many women complain of by taking them off their feet, putting them to bed and giving the organs a chance to empty themselves of blood, the pain being caused to a certain extent by hypostatic congestion. So also do we have many women who complain of pain on either side, that we diagnose as ovarian congestion, which, in reality, is due to a varicosity of the veins of the tubes and broad ligaments.

In examining patients who complain of pelvic pain, we are often unable to find anything that feels pathological, for the simple reason that the varicosity is to a certain extent diminished or completely relieved when we put her in a horizontal position for the examination. While on her feet, however, she has a condition similar to varicocele in men; that is, a varicocele of the pampiniform plexus.

Another very important factor is dress. Many corsets are made to beautify our women instead of supporting the viscera as they should. The

care of the skin, bladder and bowels is important, especially is this so at the time of menstruation so that a period convalescence may not intervene after the cessation of the menstrual flow. Constipation plays a most important role as a cause of the pelvic pain of women. The bowels are neglected more by women by far than by men, and often results in pelvic infections and is an abundant source of pelvic pain. Cold douches is another factor and should be avoided. Active and passive congestion of the pelvic organs are caused, to a certain extent, by methods employed to prevent conception. It may throw some light on the subject to inquire about the menstruation; the character, amount and duration of the flow, and the care at the time of menstruation. Practices that cut the menstruation short, like cold douches, exposure to cold, dances, etc., are productive of inter-menstrual pain.

A very important thing is the nervous make-up of the patient. If she is raised in an atmosphere of pelvic pain, she very soon, if of a nervous type, begins to have pelvic pain of her own. Her mother or older sisters are too often ready with a diagnosis of malposition or congestion of the ovaries, or perhaps they may suggest tumor or cancer. These suggestions bear very greatly on the girl's mind, and to dissuade them from a suggestion of that sort is well nigh impossible. It may be overcome, principally by getting her into a clear atmosphere, building her general physique as much as possible, and by the steady assurance that there is nothing pathological in her condition.

Discharges—When a patient complains of a discharge, it is well to find the character and amount. The history and character of the discharge will frequently explain the existence of a pelvic pain, the cause of which we are able to locate by a physical examination. Thus a discharge following puerperal septicemia or gonorrheal infection would point to the presence of a chronic endometritis or pus tubes. The chronic discharge, with occasional pain which comes on so gradually that the patient cannot tell when it started, is due generally to a passive congestion and does not result in serious pelvic disease. The different segments of the genital tract have their characteristic discharge; thus from the vagina it is whitish in color; from the cervix it is tenacious and clear; from the uterine cavity, thin and white. The normal secretions are altered by disease and at times it is impossible to determine whether you have a case of leukorrhea or gonorrhea. The microscope will clear up the field. Pain is a very common gynecologic symptom and is situated, as a rule, in the lumbosacral and

inguinal regions. Lumbosacral pain, or backache, is not characteristic of any special form of pelvic lesion and may be due to a variety of causes; as for example, the pressure of a uterine or pelvic tumor, or its dragging upon the uterine ligaments, especially the uterosacral. Retrodisplacements of the uterus are a common cause of backaches and the symptoms are most marked when the womb is bound down by adhesions. Pain in the inguinal regions or legs usually indicates disease of the uterine appendages, but its true cause can only be determined by a physical examination. Pain may also be situated within the pelvis, above the symphysis pubis, at or near the coccyx, in the anus, the rectum, or vulva, the vagina or along the urethra, or it may be associated with the function of one of the pelvic organs.

Pain due to a pelvic lesion may be referred to a distant part of the body; thus there may be pain along the anterior crural and cutaneous nerves of the thigh or it may be felt in the region of the heart, abdominal viscera, the head, the face or the mammary glands. One should find out during an examination if the patient has pain; if so, where the pain is of greatest intensity, whether it is spontaneous or evoked, its characteristics, the effect of exercise, and so on. Spontaneous pain is, as a rule, caused by acute disease, while evoked pain indicates a more or less chronic disease. The characteristics of the pain often show the nature of a lesion. It must be remembered that pain is often reflected to the opposite side to that in which the disease is situated.

The bowels and bladder must be carefully looked after; chronic constipation is often found in women, and is due to lack of attention to the bowels at the proper time. This results in hemorrhoids which is another source of pelvic pains. The relief of constipation and correction of hemorrhoids is often followed by the disappearance of many of the so-called gynecologic symptoms. Owing to the anatomy of the female pelvis, the support of the bladder and the urethra is often destroyed by traumatism occurring during labor, which produces various degrees of prolapse. The intimate relation existing between the bladder and other pelvic organs frequently causes functional urinary disturbances as well as organic diseases, due to the extension of inflammation through the lymph supply. The various functions of the organs of generation such as menstruation, sexual intercourse, child bearing and labor, expose women to many diseases and injuries, which are often directly or indirectly the cause of functional or organic urinary disorders.

Pressure upon the bladder by a pelvic tumor or an enlarged or displaced uterus may cause frequent urination as the result of irritation or lessened capacity.

We may also have tumors of the bladder or stones in the bladder, which may give us a pelvic pain that may be attributed to the uterus or some of its appendages.

Reflex Symptoms—Reflex symptoms in other parts of the body, due to pelvic disease, are very frequently met with.

Not infrequently patients come to you following a pelvic operation such as hysterectomy or salpingectomy, complaining of pain in the same region that they had before the operation, or it may be referred to the sacrum, coccyx or rectum. Or again they may complain of frequent urination and pain which is not relieved by the emptying of the bladder. You open those cases up again and are unable to find one thing which will account for the pain they are complaining of. It seems that the sympathetic nervous system or possibly some of the branches of the third or fourth sacral must be involved in some way causing a reflex pain in the parts complained of.

We, also, have gastric-intestinal disturbances as a common phenomenon; not infrequently do we have nausea or vomiting accompanying or following these pelvic pains. Constipation with flatulence may be a distressing symptom. The symptoms are so varied that there is nothing characteristic in their grouping to indicate a definite cause. These patients have every symptom of what is termed neurasthenia or hysteria, and it seems that the best treatment is preventive, not taking in any more tissue in our operations than necessary, covering up all raw surfaces and especially doing away with the varicosities.

Gastro-intestinal disturbances are the most common phenomena. Dyspepsia is frequent and is often associated with nausea and vomiting. Constipation with flatulence may be a distressing symptom. Neurasthenia next to gastro-intestinal disturbance is a most important manifestation. The symptoms are naturally varied and there is nothing characteristic in their grouping to indicate the cause. They also suffer from headache, vertigo, cold hands and feet, and from cardiac palpitation.

Treatment has been discussed in connection with a number of the conditions mentioned. In general it may be said that hygienic living, fresh air, proper exercise and rest, attention to the bowels and kidney functions are most important parts of the treatment. A certain percentage are surgical in nature and in such instances appropriate surgical treatment should be instituted.

GENERAL ANESTHESIA*

JOHN RUSSELL, M.D., Des Moines

The administration of anesthetics is rapidly developing into a full fledged specialty equaling in importance any of the other limited fields in the practice of medicine.

The ideal, universally applicable anesthetic agent, which fulfills all the requirements of perfect anesthesia, has not yet been found.

The anesthetic agent is one of the few drugs which is administered to its maximum physiological effect, frequently approaching within dangerous proximity to the lethal dose. When these powerful drugs shall be administered only by physicians especially trained for this particular work, then, and only then will the anesthetic reach its highest plane of safety and utility.

Choose your anesthetist as you would your internist, surgeon, or other specialist, by considering his qualifications, and do not place this responsibility upon the innocent bystander or the untrained assistant.

Anesthetization is more than a mechanical performance; it is an art, as well as a science, which requires the highest degree of judgment and skill. In order to secure good anesthesia, every demand of the patient must be met with a spontaneous response by the anesthetist. This dexterity can only be acquired by extensive experience and constant application of the laws which govern the administration.

Upon the anesthetist rests the responsibility for the immediate safety of the patient, and to a certain extent he may be responsible for the frequency and intensity of anesthetic sequelæ. He should therefore have an intimate knowledge of general medicine, surgery, pathology, and therapeutics in order that he be qualified to intelligently interpret the patient's condition at all times and be prepared to co-operate with the surgeon in matters wherein his judgment may be of value.

The anesthetist may do much toward facilitating certain operations by varying the degree of anesthesia to meet the requirement of the case, but the patient's life must never be placed in jeopardy in the endeavor to accommodate the surgeon. The patient, not the surgeon, must be the only criterion as to the amount of anesthetic which may be safely given.

Preparation of the Patient—The patient should not be starved; give nourishment to within a few hours of the anesthetic. In the case of robust adults no food need be given over night when the operation is set for the morning hours.

*Read before the Polk County Medical Society, Des Moines, June 27, 1916.

Water should be given freely for several days preceding the operation. The patient should be thoroughly rested before going to the operating room. Rest is of prime importance and is a frequently neglected requisite of preparation in the hurry to operate. All disturbing influences should be carefully eliminated from the patient's surroundings for as long a time as possible preceding the induction of anesthesia. Nervousness and apprehension should be remedied by mental suggestion if possible, or by administration of sedative drugs when indicated.

The routine administration of a drastic purgative the night before the operation cannot be too severely condemned. It disturbs the patient's rest; dehydrates the tissues and reduces resistance; frequently upsets the stomach and increases after-sickness. After a night spent on the stool, the average patient is neither physically nor mentally in an ideal state of preparedness.

When the bowels need attention, give a laxative the second night before the operation and evacuate the lower bowel by enemata on the morning of the operation. In cases of great exhaustion, give proctoclysis of normal saline with glucose for forty-eight hours preceding the operation. Glucose performs a double function; it maintains the nutrition and aids in the prevention of acidosis. The renal function should also receive careful investigation. Carelessness in examination and indifference to the matter of preparation often bring their own reward—a stormy convalescence or an increased mortality. For these unhappy results the anesthetic is not infrequently held responsible.

Posture—The recumbent position of the patient is preferable in most instances. However, the posture must at times be varied to meet the different requirements. In diseased conditions involving the neck, chest and upper abdomen, in which there is dyspnoea, the position naturally assumed by the patient is usually the one most favorable for anesthesia. The Trendelenburg position is seldom necessary, is of little value to the surgeon, and sometimes causes respiratory embarrassment, cyanosis, and cardiac distress. The extreme Trendelenburg position is dangerous. The sitting position should never be used in chloroform narcosis.

Anesthetization—As each patient presents a problem unto himself, and the requirements of the anesthetic may vary from analgesia to profound narcosis with complete muscular relaxation, the technique of administration must be varied to suit the individual case.

The induction period is the most important

stage of anesthesia from the standpoint of comfort and immediate safety to the patient. It is during this stage of the administration that we encounter the greatest difficulties and in which time most of the fatalities from anesthesia have occurred. When complete anesthesia has been established we are familiar with the reactions of the patient and can fairly accurately estimate the dosage required.

The anesthetist should be informed as to the nature of the contemplated operation, and, when possible, he should command a view of the operative field in order that he may vary the degree of narcosis to meet the necessities of the case with the minimum amount of anesthetic.

Of the signs during anesthesia, respiration is the most important. The anesthetist must know that the lungs are being properly ventilated at all times. Next in importance is the color, as it bears a direct relation to the efficiency of the respiratory and circulatory functions. Ordinarily the character and frequency of the pulse should be noted every five or ten minutes, but in hazardous risks, and when unusual conditions arise, the pulse must be carefully watched.

The pupillary phenomena should be noted from time to time as they bear an important relation to the depth of narcosis and the vitality of the patient. In children the reactions of the pupils are very important, being the most reliable index to the depth of anesthesia.

Of the three favorite general anesthetic agents—ether, chloroform, and nitrous oxide—each has its own peculiar advantages as well as its limitations.

Ether—Ether produces narcosis by direct action upon the nerve centers, first acting as a stimulant and then as a depressant. It is not a protoplasmic poison unless used in great strength for a prolonged time. It paralyzes protoplasmic activity, reduces hemoglobin, and inhibits phagocytosis, thereby lowering resistance and lessening immunity. Ether kills either by rendering the vital centers unable to take up oxygen or by exhaustion through over-stimulation. When toxic symptoms supervene through over-dosage, the heart continues to beat for a long time after the respiration has ceased. It is rapidly absorbed and slowly eliminated.

Ether is a very efficient anesthetic. It has a wide range of adaptability, is easily controlled, and is the safest anesthetic in the hands of the ordinary practitioner. Unfortunately, its odor is extremely disagreeable to most persons, it causes considerable post-anesthetic discomfort, and occasionally its administration is followed by serious complications, such as; suppression of

urine, albuminuria, bronchitis, and more rarely, pneumonia. The phenomena of etherization are so well known that their discussion seems unnecessary.

The chief danger during ether induction is from mechanical asphyxiation. Laryngeal spasm may be set up by too concentrated vapor or by excessive salivary secretion. Vomitus may be aspirated into the larynx or may even fill the bronchial tubes. Spasm of the muscles of the jaw not infrequently occurs, rendering respiration very difficult. The heart seldom gives trouble during ether narcosis.

Chloroform—The action of chloroform upon the nervous system is quite similar to that of ether. The cerebral centers are influenced before the sensory fibers of the cord; these before the motor fibers and last of all the medulla oblongata becomes paralyzed. Chloroform is a protoplasmic poison and is especially toxic when the oxygen tension of the blood is lowered, rapidly destroying the irritability of nerve tissues and the contractility of muscle—involuntary muscles being affected before the voluntary. It destroys red corpuscles and leads to fatty degeneration of the tissues.

Death from chloroform in the early stage of narcosis results from cardiac syncope initiated by over-stimulation of the vagus. In the later stages of anesthesia the fatalities are attributed to depression of the respiratory and cardiac centers in the medulla.

Chloroform is an agreeable anesthetic and induces most profound narcosis with complete muscular relaxation. Its margin of safety is decidedly less than that of ether. The post-anesthetic discomfort is moderate. Degenerative changes in the liver, kidneys, and other viscera are prone to follow the prolonged administration of this drug. Chloroform induction should begin with very dilute vapor, given slowly, and must never be forced. The vapor concentration should at no time exceed 2 per cent. Any change in respiration, whether inhibition or exaggeration, calls for withholding chloroform.

Fear is one of the most dangerous elements complicating chloroform narcosis. The frightened patient will invariably struggle; he will hold the breath or breathe too deeply, in either case exposing himself to the danger of overdosage. Cyanosis must be scrupulously avoided, as this anesthetic becomes extremely toxic in the absence of a sufficient amount of oxygen.

Nitrous Oxide—Nitrous oxide is a genuine anesthetic agent exerting a specific effect upon nervous tissue through the blood. Tissue

asphyxia, which may develop through want of expertness in administration, plays no essential part in nitrous oxide narcosis. When this gas enters the blood by diffusing through the thin walls of the air cells in the lungs, a small quantity is dissolved in the plasma but the bulk is carried in some loose combination with the hemoglobin. It is absorbed and eliminated with extreme rapidity and leaves the system without having undergone any chemical change. Nitrous oxide is not a protoplasmic poison, but appears to suspend rather than abolish function. It does not reduce hemoglobin and has no effect on immunity and phagocytosis. Even following prolonged administration of this gas, no cellular changes are to be found in any tissues, but certain functional derangements of the nervous system, such as headache, tinnitus aurium, and amaurosis may ensue but are of infrequent occurrence. In overdosage with nitrous oxide, the respiration stops in the stage of exhalation and the heart continues to beat for a variable length of time.

Nitrous oxide is agreeable to inhale; rapid and transient in action; producing complete anesthesia with but a moderate degree of muscular relaxation. When complete anesthesia has been established with this agent, it is impossible to increase the depth of narcosis to the point of complete muscular relaxation as may be done with ether and chloroform. When an attempt is made to crowd this anesthetic beyond a certain stage, asphyxial phenomena, characterized by muscular rigidity, jactitation, and cyanosis develop and defeat your purpose. As a rule the post-anesthetic discomfort is slight, but in exceptionally rare instances, severe nausea and vomiting may ensue. Respiratory, cardiac and renal complications are nil. Variations in blood pressure are insignificant providing asphyxial symptoms are avoided. When asphyxia develops there may be a considerable rise in blood-pressure. In most instances where a decided drop in blood-pressure takes place during operation, it is generally due to hemorrhage, operative trauma or exposure of the viscera rather than the anesthetic.

The chief disadvantages of gas anesthesia are the following: It is expensive and requires a costly apparatus; difficulty in maintaining smooth anesthesia in prolonged operations within the nose or oral cavity; lack of relaxation for intra-abdominal operations. The inconvenience of the surgeon adapting himself to an anesthetic which does not yield complete muscular relaxation is at first a serious objection. The operator who has been accustomed for years to the freedom of manipulation which ether affords, often finds it difficult to work with this anesthetic.

The chief complication of nitrous oxide anesthesia is asphyxia. Cyanosis and asphyxia are not always synonymous. Children, anemic women and others of low vitality are prone to develop asphyxial symptoms before cyanosis becomes apparent. In the plethoric, the alcoholic, and muscular persons, cyanosis develops early and usually persists during the continuance of the anesthesia without any apparent deleterious effect. In the hands of an expert anesthetist, nitrous oxide is considered the safest general anesthetic and fulfills a fundamental necessity in the surgical clinic.

Preliminary Medication—The practice of administering narcotic drugs before the general anesthetic is warmly advocated by many surgeons and anesthetists, and vigorously condemned by others. When considered in the light of reason and scientific knowledge, rather than prejudice, there appear to be many points in its favor. Morphine, or a combination of morphine with atropine or scopolamine, is generally used, and given in doses varying according to the requirements of the patient. It should be given from one-half to one hour before the anesthetic. In nitrous oxide anesthesia, preliminary medication is an indispensable adjuvant, except in children, the aged, and the very weak.

The ends subserved by the use of alkaloidal drugs are: The patient is soothed and the elements of nervousness and fear are decidedly minimized; the amount of anesthetic required is diminished; the induction stage is shortened; salivation and bronchorrhea do not arise if atropine or scopolamine are used; shock is lessened or abrogated, and many undesirable post-anesthetic effects are prevented.

Atropine, with or without morphine, should always be used before ether or chloroform. It prevents the excessive secretion of saliva when ether is exhibited. During chloroform inhalation it lessens vagal activity, thereby preventing the danger of vagal inhibition of the heart.

Anesthesia in Disease—If a patient is able to undergo an operation he should survive the anesthetic. In diseases of the circulatory system, anesthetics are usually well borne, since a carefully administered anesthetic causes less circulatory disturbance than does severe pain. In valvular diseases of the heart and in myocardial degenerations, chloroform is contra-indicated, especially when dyspnoea and edema are present. In these conditions, nitrous oxide or ether, or a combination of these should be employed. In arterial diseases, such as aneurysm, atheroma and arteriosclerosis, chloroform is theoretically the anesthetic of choice. But practically, how-

ever, gas or ether may be given with equal safety provided struggling is avoided. This can be accomplished by giving a preliminary dose of morphine and using gas for the induction if ether is desired.

Ether and chloroform are contra-indicated in renal diseases, especially if large quantities are necessary or the administration is prolonged. Nitrous oxide has no deleterious action upon the renal function.

In the presence of acute or chronic infections involving the respiratory tract, ether should not be exhibited because of its irritating action upon the mucous membranes. In these conditions, nitrous oxide is by far the safest anesthetic provided the air passages are not partly obstructed. Phthisical persons take gas without detriment. In hyperthyroidism, septic states, and all other conditions in which resistance is lowered, nitrous oxide is the anesthetic of choice.

ANAPHYLAXIS IN MEDICINE*

GUTHRIE MCCONNELL, M.D., Waterloo

By anaphylaxis is meant an increase in susceptibility to the parenteral form of injection of foreign proteins of any kind. It is a condition opposite to that of immunity. It may be natural or it may be acquired. This latter condition is indicated when the body once having received a foreign body is exposed a second time and proves to be susceptible.

Natural hypersusceptibility is shown in those persons who develop "colds" when exposed to the pollen of various flowers, or who have a skin eruption following the ingestion of certain foods.

In the study of infectious diseases we find that the symptoms are due largely to the presence of protein materials elaborated by the active organism. Some of these illnesses such as smallpox, scarlet fever, whooping cough, etc., give rise to that condition known as immunity. Our bodies, as a result of various activities of the cells, form certain substances that are able either to prevent the growth of invading bacteria or to neutralize the toxic materials formed.

Unfortunately that does not hold true in all infections. There are many that instead of causing immunity bring about a decreased resistance to subsequent invasion by similar organisms. We find this particularly the case in influenza, tonsillitis, erysipelas, etc. In these, for some reason, the previously attacked person seems peculiarly liable to further attacks.

It would seem that the original exposure had

*Read before the Waterloo Medical Society.

acted as a sensitizing dose and the second invasion took the place of the intoxicating dose. In order to make these terms clear, it will be well to explain the experimental method for bringing about the condition of anaphylaxis. In order to bring about the characteristic reaction it is necessary to first sensitize the animal. As is usual, the guinea-pig is the first choice. Into its peritoneal cavity may be injected .001 gram. of horse serum. Eight to ten days later a second injection of .1 gram is given. At this time the animal will become restless, short of breath, will scratch itself violently about the nose, then become depressed and dies within an hour. The autopsy will show the lungs to be greatly distended and numerous small hemorrhages present.

It is evident that some change has occurred which allows the destruction of the animal. Various explanations have been offered. According to Vaughn, anaphylaxis results when the strange protein in the blood reaches the cells and is slowly broken down by enzymic action. The cells, having once acquired the property of destruction, seize eagerly upon the protein the next time it is offered, disintegrate it rapidly, and so disseminate throughout the body the disintegration products, some of which may be toxic and cause the reaction. There is evidently a greater affinity between the poison and the receptors that are still attached to the cells than for the free receptors that are floating in the blood.

This peculiar reaction was first noted in 1902 by Richet, and though at first a matter purely of laboratory interest, it was soon found to have an important bearing upon the manifestations of infectious diseases. As further work was done it was found that the reaction was distinctly specific and that it was possible to sensitize an animal to several different forms of protein.

It was noted also that this susceptibility, when once acquired, might remain throughout the life of the animal, and might be transmitted by the blood of the mother to off-spring.

From the discovery of the specificity of the reaction it soon became evident that it might be used as a method of diagnosis in those conditions in which foreign proteins were the causative agents, particularly as Arthus found that distinctly localized reactions could be obtained.

If we inject tuberculin subcutaneously into a non-tuberculous patient, there will be no disturbance. A similar dose in the tuberculous will cause headache, muscle pains, fever and local reddening around the site of inoculation. This is known as the von Pirquet reaction. Possibly a more delicate test is Calmette's ophthalonic reaction, but on account of the severe disturbance

of the conjunctiva that may occur, it has been abandoned. Moro's dermo-reaction is obtained by rubbing a salve containing tuberculin into the skin. All of them, however, depend upon the anaphylactic condition, or allergie as it is sometimes called. Meaning by this an altered and usually increased property of the body to react to foreign protein.

A more recent employment of this method is in relation to syphilis, in which a ground up culture of treponema is used as the exciting agent.

From the point of view of the clinician, this question of anaphylaxis and anaphylactic shock, is of importance in other ways than in those of diagnosis. It is very seldom that protein material of any kind is injected in any way into the human body other than by the gastro-intestinal tract. Yet under certain conditions comparatively large amounts of protein are given, as when diphtheria antitoxin is given. At first this consisted of the entire horse serum but Gibson found that by a process of precipitation, a large amount of protein could be removed without losing any of the antitoxic principle.

Many a physician in the past has had some most unpleasant after-results following the use of antitoxin. Anaphylactic shock has followed within a few minutes and death quickly occurring. The vast majority of cases in which this acute reaction has taken place, have suffered from asthma, especially those who have been susceptible to the emanations from horses. The explanation that has been advanced is that the anaphylactic reaction sets up a spasm in the involuntary muscles of the bronchi which contract and shut off the alveoli.

In connection with this it is interesting to note that the evidence points very largely to the cerebral origin of the reaction. It is more severe if intracerebral injections are given and it is possible to suppress or to mitigate the symptoms if the individual has been anesthetized or treated with hypnotics.

Another manifestation of anaphylaxis is the so-called "serum-sickness" that formerly was quite common after the use of diphtheria antitoxin. It is interesting to note the close resemblance that this bears to the infectious diseases, although there is no infecting agent. For a period of eight to twelve days, as a rule, there are no symptoms. During this time there is probably an antibody formation taking place and then more or less suddenly there occurs the antibody-antigen reaction with the liberation of toxic proteins. This is made manifest through fever, urticarial eruptions or erythema, edema, of the skin, adenopathies, and joint symptoms. These

are not associated with inflammation and should not be confused with a true arthritis. The albuminuria that is sometimes present is probably not due to the serum but to the original infection. Fortunately this condition, although uncomfortable, is seldom of a serious character.

The relationship between anaphylaxis and immunity is a very close one and can be explained from a theoretical standpoint by Ehrlich's side-chain theory. When a foreign protein gets into the tissues there is a stimulation of the cells that causes a formation of specific receptors. Many of these are crowded off the cells and enter the circulation as free receptors. If more of the foreign protein is introduced at the time when the receptors attached to the cells are in greater number than the free type, the cells will be attacked and the individual will develop anaphylaxis. If, however, the free receptors predominate, they will unite with and neutralize the antigen. In the anaphylactic animal there are the same antibodies as in the immune, the difference being that in the former they predominate in the cells—in the latter they are in the serum. It might also be said that the immunized animal is potentially anaphylactic. His cells possess specific receptors, but they are protected by those in the circulation.

ERRORS IN ABDOMINAL DIAGNOSIS

To the real medical man, errors in diagnosis is an extremely interesting subject for study. Why so many medical diagnoses of abdominal disease prove to be wrong at the operating table, affords a field for the highest order of mental activity. We have often thought that a few case reports from Cabot's *Differential Diagnosis* carefully and thoughtfully studied every morning would have some of the spiritual effect the ecclesiastic receives from studying a few texts carefully and reverently considered. From time to time we were reminded of our short-comings by a candid and conscientious observer. Not long ago we were horrified and made indignant by some confessions made by Richard Cabot and but little less so by the investigations of Bellevue Hospital, N. Y., when it was shown that only 47 per cent. of diagnoses were verified by postmortem and operation. Now comes Harold L. Foss, formerly of the Mayo Clinic, and now Surgeon-in-Chief Geisinger Hospital, Danville, Pa. Dr. Foss's observations were made at the Mayo Clinic where 585 patients were studied, suffering from abdominal disease for which operative treatment was indicated and carried out. While no errors were made as to the necessity for operation, there

was a gross error in the primary clinical diagnosis of 10.08 per cent.; 75 per cent. of error had to do with the duodenum, gall-bladder and appendix. "Of 814 cases of duodenal ulcer observed at the same period, there was an error in the primary diagnosis in 33 per cent. In 10 per cent. of the cases of duodenal ulcer the diagnosis was gastric ulcer. "Ninety per cent. of supposed diseases of the stomach are not entities but rather groups of symptoms masquerading as diseases and named accordingly" (Mayo) stomach, duodenum, appendix or gall-bladder.

How happy the man must be who makes his diagnosis, but rarely exposes the diseased organ and cures the same patient from year to year by a carefully selected diet and proper medicine. By this method the per cent. of error is immensely reduced.

One very important fact in relation to diagnosis is coming to us, which we should note and should offer prayers daily to be saved from and that is the "lone diagnosis of neurosis." Dr. Foss records a group of 1000 cases in which 17 were turned away as neurotics, some of whom were afterwards found to have operative lesions.

IMPORTANT JUDGMENT OF A CANADIAN COURT

Some time ago a patient received a burn in the Smith's Falls Hospital by a hot brick, which was placed in the bed to warm it, when the patient was taken from the operating room. When the case came up for trial before Mr. Justice Britton, says the *Canada Lancet* for January, 1916, he dismissed the action. From this judgment the patient appealed. The appeal was heard before Chief Justice Falconbridge and Justices Kelly, Riddell and Latchford. These four judges came to a unanimous finding in favor of the patient and granted the appeal, awarding damages of \$900.

The court held that when a hospital furnishes beds, foods and nurses for patients it enters into a contract with them, and becomes liable for acts of negligence on the part of its nurses. This is a most important decision so far as hospitals are concerned. It will have the effect of compelling them to lay down rules for doctors and nurses so as to avoid, as far as possible, the occurrence of accidents for which the hospitals could be held liable.

The judgment will do good, as there has been much doubt in the past regarding the liability of these institutions in this matter. The hospitals will, no doubt, welcome the decision, for the simple reason that they know now their responsibilities, and can take proper measures to protect themselves.

An application for an appeal in this case has been refused, as it is a matter of express contract, and not matter of public interest is involved.—*Canada Lancet*, January, 1916.

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THE MEDICAL DEPARTMENT OF THE STATE LIBRARY

It must be a source of humiliation to the medical profession of Iowa to realize that there is not a public medical library in the state, nor is there a medical department of a public library of any considerable size. The Library of the State University has a small medical branch used chiefly for university purposes and cannot be well utilized by the profession in general. The State Library at the Capitol at Des Moines, has about 1400 volumes, but no established medical department and no person familiar with medical books employed to classify and make what books the library already possesses, of any material value to the profession.

On inquiry we find that in most states an effort has been made to secure a medical department of the general State Library, and a large collection of books may be found in the public libraries at nearly all the capitals in the country and in most of the large cities public libraries have a medical department or special medical libraries that can be utilized by the profession of that city and neighborhood. Iowa has no large cities, Des Moines the capital, being the largest. The capital might as well be located in a country village so far as any co-operation on the part of the profession in Des Moines is concerned in relation to developing a library. The profession outside might be inclined to feel that the Polk County Medical Society should have enterprise enough to secure a permanent home and a library department, but that is not liable to occur in the present generation. We, therefore, must depend upon the state to furnish us with a library of suf-

ficient scope to cover the general public needs for the whole state.

It is sometimes supposed that a library necessarily consists of a large collection of books, but that is quite a mistaken idea because medical books will not classify themselves automatically nor is there any automatic device that will disseminate knowledge to the medical profession over the state. We should in the first place secure a competent medical librarian who will know what the needs of the profession are, and know how to help the doctor who is trying to look up the literature of any particular subject, and in cases where the doctor desires to examine the reference itself, be able to secure for that doctor the reference needed. Then as soon after providing for a medical librarian as possible, appropriations should be made for the purchase of books and journals, particularly of the kind and character that the doctor would not naturally place in his own file.

Medical bibliography has become a specialty in itself and men who are doing a large amount of research work and going over the literature for the purpose of finding out what has been discovered, maintain a private helper in this direction who is able directly or indirectly to secure the desired data, but men who are doing a modest amount of work and publishing a limited amount, cannot afford to maintain a private secretary for the purpose of looking up references. We assume there are many occasional contributors who would like to consult medical literature on a given subject without going to greater expense and trouble than to examine the State Library at Des Moines. If members of the medical profession would visit the State Library and examine the law library and ascertain the amount of work done there for the benefit of lawyers, and then go over to the medical side and see what is being done for the medical profession, then they must get the feeling pretty well soaked in that the medical profession does not count for much in the eyes of the people of Iowa.

MOTION STUDY FOR SURGEONS

There is a sentiment among a large portion of the laity, and also it may be said among the medical profession, that the practice of surgery and hospital service cannot be measured by the standards generally employed by the industries. It has come to be realized among all industrial undertakings, that efficiency is one of the most important factors to be taken into account, and that an efficiency shop must necessarily control the market. It may be generally held that the skill of a

surgeon lies more in the matter of diagnosis than in dexterity of operation, but standardization in diagnosis is as essential as standardization in any line of human effort.

In an editorial in the Literary Digest, in the "Science and Invention Department," some very interesting statements are made, supported by observations and arguments that cannot be easily controverted. It is stated: "The surgeon who used to be considered the most skilled and accurate of all hand-workers in the world, has now so far fallen behind that for examples of the most efficient work of the hand we must now look not to him, but to the industries."

It is further stated: "We need a standard hospital, with tools and methods based on scientific study, which shall serve as a model for all others."

Mr. Frank B. Gilbreth has taken up the study of the question of operative efficiency and hospital efficiency, in which he attempts to show how the great majority of the surgical work today is not what it should be nor are the hospitals organized with a view to efficient methods of rendering service, and that not until a higher degree of surgical dexterity has been reached and a better organization of hospitals been effected, can surgery place itself in the front ranks of modern scientific efficiency, nor can they compare with the present industrial development of which we can point to so many examples.

We take pleasure in reproducing what Mr. Gilbreth says in the way of examples worked out, and conclusions reached.

"After visiting some of our most prominent hospitals, we found that the surgeons could learn more about motion-study, time-study, waste-elimination, and scientific management from the industries than the industries could learn from the hospitals. We then and there decided to make a vigorous campaign to revolutionize the present methods of hospital management, and to teach surgeons our methods of motion-study, that waste in the transference of skill in surgery might be eliminated, and that the best methods in the mechanical trades of the industries might be available and at the service of the surgeon."

"We have since studied many hospitals, some as far west as California, as far north as Toronto and Montreal, as far south as South Carolina, as far east as Germany. In each hospital, while recording existing methods, we have tried to create interest in the subject of motion-study and intensive methods for obtaining mental and manual efficiency in teaching and practicing surgery, and in changing the management so that the

methods of the best may be recognized, standardized, and available to all. In the beginning our investigations caused much laughter, and we might have been completely routed by the derision and criticism encountered if we had not had measured facts to guide us instead of tradition, personal opinion, and 'judgment' ('judgment' being too often the mere selection that comes from familiarity with too many wrong methods.) We are pleased to see that many of the doctors whom we interviewed are now (1913-1914) members of committees on hospital efficiency, who are recommending the beginning of actual campaigns to do that which some three years previously was considered a joke, and in some cases an impertinence.

"In studying these many hospitals we find the conditions, as a rule, much worse from a managerial standpoint than in the average factory, and some hospitals are so bad that they should be actually closed immediately.

"The standardization of hospitals is now gradually being recognized as desirable and necessary. Such standardization must be based on measurement, which, so far as the manual processes of the surgical clinic are concerned, consists mainly of motion-study.

"The tools of the surgeon have not been standardized in any satisfactory way. Any economic classification made of the tools of a hospital shows that the tool situation is positively pathetic and ridiculous, this present state being the outcome of the incentive which ever exists to design special tools. This condition can be realized only by subjecting the present tools to the tests of motion-study.

"Great practice with comparatively few tools is one of the laws of the most efficient use of tools. How does this compare with the custom universally present in surgery today? The average doctor usually considers that the possession of specially designed tools is a desirable asset. The constant incentive under present conditions in surgery is to design more tools, since the designer receives credit from the public, and sometimes also from his co-workers, and occasionally has the honor of having the new tools named for him. Naturally, the greater the number of tools, the less must be the practice with each; the smaller becomes the change of having a standard tool which is used by all. The general tools of the hospital are by no means as carefully selected as are those of the trades and factories. There should be one central, specially equipped laboratory for measuring, testing, and comparing all new designs with existing standards."

THE FUTURE OF HOMEOPATHY

Dr. A. W. McDonough of What Cheer, Iowa, in a paper before the Hahnemann Medical Association of Iowa, and published in the Iowa Homeopathic Journal, takes a rather pessimistic view of the future of homeopathy. Dr. McDonough states that not many years ago we had twenty-one homeopathic colleges in the United States, each college full of students. Today we have nine homeopathic medical schools in the United States, and very few students. The Doctor recommends that the homeopathic medical profession should be more active in encouraging students to take homeopathic medicine, and states that if the 350 homeopaths in the state would each "send one student to our college every two years we would enroll 175 students per year instead of four or five," and "if each one would send one student to our college every four years we would enroll 87 students," etc. We are not prepared to say whether this increased activity on the part of the homeopaths would increase the number of students attending our homeopathic medical schools or not, but we apprehend that this is not the real cause of the decline of homeopathy.

We are free to admit that homeopathy has contributed in certain ways to bring about a wholesome change in the practice of medicine, but now the demand is for scientific practitioners who will be able to exert an influence in health and sanitation, and will base their diagnosis on scientific methods of inquiry. Homeopathy certainly could not go on with the methods of instruction employed in their institutions. It did not fulfill the requirements of the present advanced state of scientific medical practice. There are, no doubt, some useful things in homeopathic therapy, and certainly we have no controversy with any one who prefers the homeopathic method of prescribing medicines. In our own state we believe it to be the true policy of the homeopaths to educate their students side by side with students that are working in scientific lines, and that the application of homeopathy in the medical school should be limited to two chairs the chair of therapeutics and the chair of practice; that in all other respects the student should pursue the same course of study that all other medical students pursue. If homeopaths insist on a special and distinct system and endeavor to maintain courses of instruction as a separate organization, they are sure to fail. The class of young men who enter upon the practice of medicine at the present day must meet the requirements of scientific medicine in all its departments, and when students are in-

vited to accept courses of instruction in the very limited field of homeopathy, they will not be students who can compete in the field of medicine today, and when we place the attendance of the Medical Department in parallel columns with the Department of Homeopathy, the student and the general public will come to realize the weakness of homeopathy.

If all students are classified as students of medicine, and a certain number of them choose at the proper time in their course to take up homeopathic therapeutics and practice, we need not so fully advertise to the public the low state to which homeopathy has fallen.

In an editorial not more than a year ago, we urged that in the interest of homeopathy; that this change be made, and that students be permitted to elect what course of practice they will adopt, and if to the mind of the scientifically trained young man, homeopathic therapeutics possessed certain attractions and perhaps advantages over any other system of therapeutics, then he will elect that system.

If the future is to be measured by the past, in a few years no students will be found in the homeopathic departments of state universities. Therefore, moved by a spirit of friendliness to homeopathic medicine, we urge that the friends of homeopathy cease to urge the continuance of a separate and distinct department of homeopathy except so far as certain chairs are concerned.

TYPHOID FEVER IN ELGIN, ILLINOIS

The Chicago Tribune of September 16th contains an entertaining account of a typhoid fever outbreak in Elgin. We are informed that the city has a commission form of government and for business reasons presumably, a harness-maker was made health officer. We learn that there are graduate medical practitioners in Elgin, but apparently none as well qualified to protect the health of the community as the aforesaid harness-maker. Sometime in June, the first cases of typhoid fever appeared, and although the health officer was notified, nothing was done in the way of investigation or prevention—the notification was ignored—175 cases have developed with 11 deaths. It appears that a personal investigation made by Dr. A. L. Mann, showed that the infection came from the water supply of the Elgin National Watch Company. When the company was informed of the fact, every means were taken to remedy the fault, and the company has spared no expense in providing for the relief of all infected persons. When the State Board of Health was informed, State Inspector Mooney

and Dr. E. S. Godfred, promptly appeared on the field to find that the Watch Company was doing everything possible to relieve the situation. All infected persons were employes of the company, and they were taken to the hospital or cared for at their homes—nurses being employed—at the expense of the company. It appears that the physicians of Elgin, the State Board of Health, and the Watch Company, have done all in their power. The fault lies with the health officer, primarily with the city administration, but above all, with the general public which is responsible for the commissioner. It is not to be supposed for a moment that the city administration would with deliberate intention, accept the responsibility for 175 cases of typhoid fever and 11 deaths. It is all the result of American indifference to health and life.

There are other signs that point to the fact that we are a careless and overgrown people. Only a few days ago the newspapers were telling the public that a vast combination had been formed for blackmail purposes; to make use of a law enacted for another purpose, to secure large sums of money by a shrewdly conceived scheme by which unthinking, witless or timid persons were led into a position of apparent danger where by false witnesses, prejudice and evil thinking, innocent persons might be brought to grief, facts only too well known to the medical profession. Such schemes are likely to fail, and not infrequently bring the actors into great danger. Unfortunately in a government like ours, if a large enough sum is realized, it excites admiration and the principal offenders go free.

We are further advised that a young and proud non-commissioned naval officer was arrested and perhaps disgraced because he could not humbly accept the treatment accorded him by a body of swell young ladies who were playing at nursing at Lake Geneva. It appears that he could not with proper grace fill the place of butler, chauffeur or any servile function these patriotic young ladies might desire. It was, no doubt, very improper for a non-commissioned officer to get mad and show it in the way he did. For ourselves we feel that the government should reserve proud and brave young non-commissioned officers for fighting purposes in time of need and send out slender young officers with delicate moustaches and soft speech to prepare swell young ladies, in two weeks time, for base hospital nurses.

We cannot avoid agreeing with the Chicago

Tribune that we rather like the young non-commissioned officer who refused the small present given in the spirit of tipping the head waiter. We have personal information to the effect that at least some of the young ladies regretted the condescending manner in which this young man was treated.

We trust that the country will not suffer the loss of a young officer that we so much need, but our experience in the past has not been reassuring. We wonder if the day has passed when skill and bravery has any recognition in our country, or is it necessary that we should have some of the experiences enjoyed by our European neighbors to bring out manly qualities.

DEFECTIVE LABORATORY REPORTS

In the August number of the Journal of Laboratory and Clinical Medicine, appears a paper on this subject that is worthy of serious consideration. We take it that the Drs. Williams have had trouble like our own. Many laboratory reports have come to us having no value whatever and we have been obliged many times to ask for an explanation. We often send specimens of urine to the laboratory for a helpful aid to diagnosis and the report comes back "negative" or the findings for albumen "positive" or "a very little" or there is a "precipitate." What is meant by a precipitate? So far as albumen is concerned, it should be a coagulum; a precipitate should refer to the solid state of a crystalloid thrown from a true solution. Sometimes the word "trace" is used. That is generally too indefinite for our use. "Hyaline casts" come so frequently that we have come to disregard them. Often the report comes pus or blood "a few cells" or "absent" as if this finding had some significance when as a matter of fact, a few pus or blood cells should be regarded as normal, particularly if the patient is a female. Two or three cells in a field has quite a different significance from clumps of five or ten in a field.

The report on blood examination are often without value on account of indefinite or loose statement. The report we get will probably be sufficient to eliminate some question in diagnosis, but very often we desire a laboratory report that we can take into account in arriving at a diagnosis; which may give emphasis to some fact that has been called out in the history of the case; or even give one a starting point in the study of the patient, but when the report comes "negative" or "positive," we doubt if we have expended our money wisely.

THE DZURO-SCRUBY-MORDEN MALPRACTICE SUIT

John Dzuro brought suit for \$15,000 against Drs. Scruby and Morden for removing the tonsils of his son John eight years of age. It appeared that the boy was so much afflicted by enlarged tonsils that he could not do well in school and was sent home until the disease could be relieved. The mother returned with the boy and was told that it was necessary that the tonsils should be removed for his own safety and well being; the mother consented if the boy was willing. He readily consented and the next day or in a few days he went to the Doctors' office and the tonsils were removed by Dr. Morden, school physician, with the mother's and the boy's consent. Young John at once returned to school, much improved in every respect. The teachers in this school testified that before the operation the boy was sub-normal both physically and mentally; afterwards improved rapidly.

It could not be shown that the father gave his consent and that according to a strict interpretation of the law he had a cause of action, notwithstanding no damage was done and even been benefited. The plaintiff's attorney did not allege damage but that consent to the operation was not granted. Our attorney filed a motion for a directed verdict and Judge W. H. McHenry with that wider conception of the duties of the law, said: "Johnnie's case is typical of the new conception of our duty to childhood. Public welfare demands that the child must be safe-guarded even though the wishes of the patients may have to be ignored. It is the duty of the public schools and of the public as a whole to see to it that the growing child has an opportunity to develop under the very best conditions."

A verdict was directed for the defendant.

In the October number of the Journal of the Iowa State Medical Society, appeared a series of letters written by Dr. J. M. Chittum of Richmond, Iowa, making complaints that he had not been treated fairly by an institution called the "Standard Laboratories of Chicago," supplying physicians with drugs and medicines.

Since the appearance of Dr. Chittum's letters we have received several letters from other physicians, members of the State Society, to the effect that Dr. Chittum had not been fair in his statements and that this institution was in no way imposing upon the profession and that Dr. Chittum's grievances were imaginary rather than real. For our own part we are free to confess that we never heard of the "Standard Laboratories of

Chicago" until receiving Dr. Chittum's letters. It is quite impossible for us to investigate the merits of every question, and we can only rely on the statement of members of the Society when matters of public interest to the profession come up. Now in view of the fact that Dr. Chittum has made certain statements, it is fair to presume that other gentlemen whose interests are equally involved, would make certain statements that will put us in the right as to this matter.

We have been informed that about 350 members of the profession in this state are interested in the "Standard Laboratories of Chicago." The plan as we are advised, is to sell to the physicians the drugs used by them in their practice, and also offer to sell them certain shares of stock, and the profits derived from selling this medicine to the doctors, is paid back to them in the form of dividends. We have to confess our inability to follow these methods of doing business, but we are told that it is substantially the same plan as that adopted by the drug trade under the head of "Rexall." It is stated that this is a form of profit sharing which will no doubt be appreciated by the medical profession.

WORKMEN'S COMPENSATION AND TUBERCULOSIS

The Supreme Court of the State of New York handed down a decision recently which will emphasize the importance to employers of labor to examine their men in all departments that involve exposure. It will furthermore demonstrate the fact that the rules as adopted by the Industrial Commission may not stand the test of the Supreme Court and will emphasize the fact that the medical men taking up industrial work must inquire carefully into the conditions and observe carefully and record carefully in order that he may render proper service and protect himself against adverse circumstances.

The case referred to was that of a laborer who developed tuberculosis following exposure while at work.

The case, *Rist vs. Larkin & Sangster, et al*, was an action brought under the New York workmen's compensation law which provides for compensation for accidental injuries arising out of and in the course of employment and such disease or infection as may naturally and unavoidably result therefrom. The plaintiff it appears was a workman employed in operating a crane on the Mohawk River, and on occasion, the framework of the structure giving way, to save himself from possible danger, he jumped into the shallow waters of the river and waded ashore. Not being accustomed to such exposures, he contracted a heavy cold and pleurisy which developed

into pulmonary tuberculosis, by reason of which he continues disabled. The state commission awarded damages to the plaintiff, and on appeal, the higher court affirmed."—(Charlotte Medical Journal.)

THE RELATION OF LONG HOURS TO ACCIDENTS

Mr. Louis Brandeis, before being appointed to the Supreme Court of the United States, working on the constitutionality of the Oregon Ten Hour Law, in a two volume brief gathered from many sources the effect of the strain of attention in industrial processes on the production of accidents. It was found that twice as many accidents occurred in the second last hours of the morning as in the first hour. This was shown by the records of the Dayton National Cash Register Company. The Cadillac Motor Company for nine months shows 107 accidents in the first hour and 152 the fourth hour. The Wisconsin Industrial Commission, reporting the accidents from January, 1913 to July, 1914, recorded 737 accidents during the first hour of work; 1,805 during the fourth hour; 1,546 the ninth hour.

The Imperial Insurance Department of Germany reported in all industries that only 4.94 per cent. of persons injured had been at work less than one hour, 8.63 per cent. between one and two hours, 9.21 per cent. between two and three hours, 11.28 per cent. between three and four hours, and 12.20 per cent. between four and five hours. The number of accidents has been shown to decrease with the reduction of hours. The greater the strain on attention required by the industrial process or occupation, the more reason exists for a shortening of the working day or a more frequent interruption of the day's toil with adequate rest."

MALPRACTICE INDEMNITY IN CALIFORNIA —A NEW FEATURE IN STATE DEFENSE FOR MALPRACTICE SUITS

At the forty-fifth annual session of the Medical Society of California at Fresno, California, April 19, 1916, the House of Delegates passed a resolution requesting the Council of the Medical Society of the State of California to take proper and appropriate action to the end that means may be provided whereby members of the Medical Society of the State of California who desire to do so may voluntarily contribute to a fund, out of which fund shall be paid the amount of judgments assessed against such contributing members in any suit or suits against such contributing members for damages for alleged malpractice, and also payment of such sums as may be necessary for the settlement of claims against such contributing members when in the judgment of

competent and experienced attorneys, by and with the concurrence of the attorneys for the Medical Society of the State of California and by and with the consent and concurrence of such contributing member, it seems wise and expedient to settle such claim or claims and the necessary expenses connected therewith.

It is proposed that within six months after July 1, 1916, if 300 members contribute \$15 each to create a fund from which indemnities in cases of judgments being assessed or expenses of suit or settlements made shall be paid. It is also provided that the same members who have paid \$15 shall in addition execute a promissory note payable one year after date without interest which shall be collected and credited to the account of the second year.

This proposition means that the State Medical Society shall conduct an indemnity insurance which shall include the payment of judgments—and settlements in cases in which it does not seem wise to defend—and all court costs. It means that two methods of protection in malpractice suits shall be provided, one as at the present time in most of the states, and an indemnity feature, which shall provide for the payment of judgments, settlements, etc., for those who elect to provide a special fund for this purpose by contributing \$15 annually or such sum as experience shows may be necessary. It is wise to provide that not less than 300 contributors shall enter into this plan before it is adopted. Our own experience shows that if 300 or more members joined in this indemnity plan, \$10 would carry this insurance.

DISEASE AND WORKMEN'S COMPENSATION LAW

Rhode Island Court Allows Compensation for an Accident which Was Due to Dizziness Resulting from Disease

The Supreme Court of Rhode Island has decided that an injury resulting from a fall which was partly "due to dizziness or unconsciousness induced by a disease," was an injury "arising out of and in the course of" employment, for which the employe was entitled to compensation under the workmen's compensation law.

The injured employe was a hack driver who was suffering from "hardening of the arteries and Bright's disease." He fell from the seat of a hack which he was driving and was seriously injured.

We always find something interesting in the Texas State Journal of Medicine. In the August number under the designation of the "Twin Pesti-

lence Number" are grouped several items of which the following is one:

Order of the Golden Feather

Below is a copy of a circular letter being mailed to a selected list of Texas physicians.

St. Louis, Mo., July 7, 1916.

Dear Doctor:

Naturally men are either Conservatives or Progressives—there are always two parties in almost everything. The American Medical Association represents the conservatives; heretofore the progressives have had no great National organization.

We—the majority of the medical profession—who believe in division of fees (i.e., that the surgeon should not "hog" the whole of the patient's money and leave nothing for the family doctor), are no longer welcome in the A. M. A. We are therefore organizing the Medical Society of the United States, which will not be conducted for the benefit of a few selfish egotists. We would like to have you with us.

It costs only \$1.00 to join us. This covers dues for 1916 and includes expense for the beautiful certificate of membership (suitable for framing) which you will receive on admission. Fill enclosed blank and return to me with \$1.00.

Cordially yours,

EMORY LANPHEAR.

P. S.—Membership in your local Society is NOT obligatory. On the line "Recommended by" put the names of two doctors (preferably of your neighborhood) who will vouch for you.

REED'S BACILLUS OF EPILEPSY*

A. J. HINKELMANN, M.D., Galesburg, Illinois
Director, Galesburg Laboratory

Through the work of Reed,* the question of a specific organism as the exciting cause of the seizures of epilepsy has been set forth. Having previously worked from a different basis with an organism I believe is the same as the one isolated by Reed, and having since the appearance of his articles, succeeded in finding the organism in the blood of an isolated case of epilepsy, I am in a position to add a few facts to what Reed has already said. I am sure this will be of further aid to the profession in the direction of reaching final conclusions as to the significance of the organism.

Method of Invasion of the Human System

Under this head, Reed has made very clear the point that the organism is evidently taken into the intestinal tract by way of the mouth, and enters the blood through a cecal or an appendiceal focus, and leaves the question open as to the danger of communication. What would be the consequence in case the organism was ingested by a normal individual, and to what extent may those with predisposing lesions expect to escape infection?

From a basis of experiments I conducted during

the summer of 1915, and before I had any knowledge of the pathology of the organism, it may be stated that it is a very frequent inhabitant of the intestinal tract of probably the majority of people. My conclusions at the time of my experiments were that it is one of the regular members of the so-called intestinal bacteria.

My interest in the organism was its high resistance to germicidal agents, and through this fact it becomes an easy matter to demonstrate its presence in the intestinal flora and also that it is commonly present. It will live in phenol solutions of from 5 to 10 per cent. for many hours and a much higher strength is necessary to kill it instantly. Among the very large number of different species of bacteria that are usually found in the intestines, it is commonly the only one that will survive a thorough treatment of the stool with a 5 or 10 per cent. phenol solution.

My method of isolation was as follows: From 25 to 30 grams of solid feces were made into an emulsion with 50 cc of a 5 per cent. solution of phenol and allowed to stand for 30 minutes or an hour; cultures were made on agar slants and incubated. I have never made such cultures from the stools of epileptics with the view of noting how numerous the organism is present, but in normal individuals, a loopful of the above emulsion spread over an agar slant will yield from 1 to 6 colonies after twenty-four hours of incubation.

The organism is highly hæmolytic, and to this last fact may be due a part of the pathological conditions present in epileptics. Cultures made on blood agar plates will show a hæmolytic spot at the point of a growing colony long before the colony itself becomes visible. In the case that came under my observation, I found it abundantly present in the capillaries, and both the spores and the organism could easily be demonstrated in smears from the blood directly.

Conclusion

In view of the fact that the organism does enter the circulation and there multiplies into great numbers and is so generally found in the blood of epileptics, the conclusions of Reed as to its specific nature become at least very plausible. It would be hard to conceive that an organism with such a high hæmolytic property could enter the circulation and multiply to such numbers as smear preparations from the blood indicate without producing diseased conditions within and resulting in corresponding clinical manifestations without.

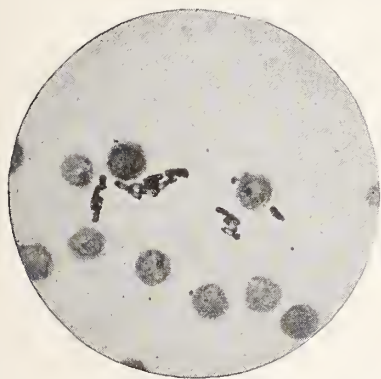
At any rate, what has already been established in regard to the organism makes the question one most worthy of serious consideration and extensive investigation. The universal presence of the organism in the intestinal flora is no argument against its probable pathology, but simply adds to the importance of the gateway through which it enters the blood stream, in consideration of the question of treatment.

If further investigation should finally establish that the *Bacillus Epileptics* is the exciting cause of

*Reed, Charles A. L.—*Journal of the American Medical Association*, January 29, and May 20, 1916.

the seizures of this disease, little probably can be hoped for in the way of prophylaxis or cure through efforts to prevent the organism from entering the intestinal tract or to eradicate it when present. The best attention probably will have to be directed toward those lesions which open the way for it from the intestines into the circulation.—New York Medical Journal.

LEGEND



Bacillus epilepticus directly in blood smear from an epileptic patient five hours after seizure

INTERPRETATION OF PHYSICIANS' LIABILITY CONTRACT

Seay vs. Georgia Life Ins. Co., 179 S. W. R., 312

The above case may prove of interest to surgeons who indemnify themselves against suits for malpractice because of the many technicalities of the policies which they carry. The plaintiff in the above suit was indemnified in the above company and carried what is known as a physician's liability policy. Prior to the institution of the above suit, the plaintiff had been sued by a patient who had been injured in an accident and who was attended by one of the plaintiff's assistants. The patient succeeded in recovering a judgment against Doctor Seay amounting to \$1,000 and costs. The suit under discussion was brought by the Doctor to recover this amount from the insurance company under the terms of the policy which it issued to Doctor Seay. A clause in this policy was that it undertook to indemnify Doctor Seay "against loss from the liability imposed by law upon the assured for damages and on account of bodily injury or death suffered by any person or persons in consequence of any alleged error, or mistake, or malpractice by any assistant in the employ of the assured while acting under assured's instructions." In the malpractice suit against Doctor Seay the following facts were brought out by the testimony: That the assistant undertook to diagnose the injuries of the patient, proceeded to treat him and in so doing was acting under the general directions and within the scope of his employment although the employer, Doctor Seay, did not see the patient at the time, gave the patient no personal instructions or attention, and apparently had no knowledge of the particular case. The defense of the insurance company in the case under discussion was predicted

solely upon the clause in its policy which is quoted supra, its contention being that the assistant in his treatment of the patient in question was not acting under the assured's instructions within the meaning of the policy and that therefore the company was not liable for the expenses and judgment of that trial. The plaintiff contended that the assistant was acting in the line of his employment according to general instructions and custom which prevailed between himself and Doctor Seay. Should the court hold that an assistant acting under general instructions and within the scope of his employment was acting under "assured's instructions," the purpose as defined in the policy within the qualifications attempted would entirely fail. However, in a physician's contract such as this one, the experience and ability of the individual insured necessarily enter largely into the consideration. As a safeguard against error, mistake, malpractice, or carelessness of the assistant, the insurer stipulates for the instructions of the insured, and following this line of reasoning the reviewing court stated in substance that therefore it could not be held liable for any mistake, negligence, malpractice, or carelessness of the assured's assistant while acting under the general instructions of the insured but without any advice or directions from the assured in the particular case, the policy being without provision as to the qualifications of the assistant. From a professional standpoint, the assistant was acting independently and without the suggestion, aid, or supervision of Doctor Seay. The finding of the court was that the insurance company was not liable upon its policy and the finding was in its favor.

It might be well to add for the benefit of physicians and surgeons who indemnify themselves against the liability which the law imposes upon their acts, that the holders of this form of policy of insurance should note the many technicalities with which the insurance companies who write this form of insurance fortify themselves so as to make this form of policy a beneficial one to the company from a stockholder's point of view. The writer has a number of cases in mind where the insurance company, after accepting premiums, disclaimed liability and under the technical provisions and limitations of their policies were enabled to successfully defend and defeat any suit brought against them at a later date for the recovery of costs and expenses incurred by the policyholder in defending himself against a suit for malpractice. We would suggest, therefore, that the holder of a policy of this character, read carefully all the provisions of his policy and bear them well in mind. Malpractice suits against physicians and surgeons have been increasing in the last ten years to such an extent that they now form no inconsiderable portion of the suits filed in the courts. From the foregoing, the writer does not mean to convey the impression that physicians and surgeons are negligent. The increase is probably due to the fact that the profession has now reached such a high standard that the patient feels that failure to cure is evidence of negligence and attempts to seek relief

via the pocketbook of the attending physician and surgeon. Judge William H. Taft, in a decision which he rendered while on the bench, stated that if the foregoing were the law "few would be courageous enough to practice the healing art, for they would have to assume financial responsibility for all the ills that flesh is heir to."—J. A. Castagnino. (Surgery, Gynecology and Obstetrics.)

THE FAMILY OF DR. JAMES CARROLL GIVE RECOGNITION

Recognition of the family of Dr. James Carroll, the martyr to the discovery that the yellow fever germ is transmitted by the mosquito, has been obtained from Congress through the efforts of a committee of the American Medical Association headed by Dr. C. A. L. Reed, of Cincinnati. Dr. Carroll's widow, Mrs. Jennie Carroll, is to receive from the government one of the cottages in Officers' Row at Ft. Thomas, Kentucky, to be used by her and her family as a permanent home.—(The Ohio State Medical Journal.)

BOOK REVIEWS

A TEXT-BOOK OF PATHOLOGY

By W. G. MacCallum, Professor of Pathology in the College of Physicians and Surgeons, Columbia University, New York. With 575 Illustrations, Chiefly from Drawings. By Alfred Feinberg. W. B. Saunders Company, 1916. Philadelphia and London. Price Cloth \$7.50 Net; Half Morocco \$9.00 Net.

The author states in the Preface that it is not intended as a book of reference but as a text-book and contains essentially the course in pathology given students of the College of Medicine, Columbia University. The author has aimed to discuss diseases as far as possible on the basis of etiology and has not gone into a consideration of special pathology to any considerable extent.

The first eight chapters consider the fluids of the body, disturbances in the circulation of the fluids and the relation of the fluids of the body to the tissue cells, metabolism, metamorphosis degeneration, infiltration, pigmentation, etc. Nine chapters are devoted to the Defenses of the Body Against Injury. Dr. MacCallum refers to injury as the basis of pathologic changes—not necessarily traumatic injury but includes chemical injuries and insults to tissues which result in certain reactions, as inflammatory reactions. Defense to injuries constitutes one of the fundamental chapters in pathology. The author next proceeds to consider types of injury, Physical and Mechanical Injuries, Chemical Injuries, Obstruction of Hollow Organs, Obstruction of Respiratory Tract, Obstruction of Urinary Tract, Obstruction of Circulation and Bacterial Diseases, Infections of Uncertain Nature, Parasitic Diseases. Eighteen chapters are given to the above enumer-

ated types of injury. Proceeding from a consideration of the types of injury which lie at the bottom of disease changes, the author draws attention to the effects of injury to the Blood and Blood-Forming Organs; of Internal Secretions, of Metabolic Disturbances.

Chapter Forty-six considers Arthritis Deformans. While rheumatism, proliferative arthritis and degenerative arthritis deformans are probably due to the reaction of some form of bacterial infection, the nature of the relationship is too indefinite to admit of very clear definition. The remaining ten chapters are devoted to Tumors, Benign and Malignant.

This work appeals to the student on account of its arrangement. In the past few years several very valuable books on pathology from the pen of men high in the ranks of authority in scientific medicine, have appeared, and while practically all present the same facts, yet the arrangement of the subject permits of a choice in accordance with the mental bias of the reader. This book comes especially near the requirements of the student in medicine and the practitioner who desires to review or revise his knowledge of general pathology.

DIAGNOSIS AND TREATMENT OF SURGICAL DISEASES OF THE SPINAL CORD AND ITS MEMBRANES

By Charles A. Elsberg, M.D., F.A.C.S., Professor of Clinical Surgery at the New York University and Bellevue Hospital Medical College. Octavo of 320 Pages, With 158 Illustrations. W. B. Saunders Company, 1915. Philadelphia and London. Cloth \$5.00 Net.

This book appears to be one of the most valuable contributions to medical science that has recently come from the medical press and is entitled to special consideration. A proper appreciation of the difficulties of efficient surgery of the spinal cord and its membranes can only be reached by a careful study of the subject and a thorough training in neurology; this is touched upon in the Preface. The author states; "A certain amount of neurology has been included because the author is convinced that only those can do successful neurologic surgery who have gained a working knowledge of organic neurology."

Part I is devoted to the Anatomy and Physiology of the Spinal Cord and to the symptomatology of Surgical Spinal Disease. It is beautifully illustrated by cuts and diagrams which serve as helpful aids in an appreciation of the anatomy and physiology of the cord.

Chapter VI details methods of examination and chapter VII, X-ray in Spinal Diseases; chapter VIII, Differential Diagnosis; chapter IX, Lumbar Puncture; chapter X, Laminectomy. Various methods of exposing the cord are considered; preference is given to the complete removal of the spinous processes and laminae of a number of vertebra. The method is fully illustrated as well as the appearance of the

dura when exposed and of the cord when the dura is exposed. The difficulties and dangers of the operation are pointed out. The author is of the opinion that the danger of the sudden escape of cerebrospinal fluid has generally been much overestimated.

Chapter XI considers Division of the Posterior Spinal Nerve Roots. The operation is recommended as a last resort in pain from traumatic nerve root lesions involving compression from bone of inflammatory products, is recommended for spasticity; for severe gastric crisis and visceral crisis in tabes.

Chapter XIV deals with operations for Spina Bifida.

Chapter XV, Abnormalities and Diseases of the Spinal Vessels.

Chapter XVI, Recent Injuries of the Cord—fractures, dislocations of the vertebra—bullet and stab wounds—This chapter has very distinct relations to traumatic surgery and especially appeals to the surgeon having to do with accident surgery.

The last section that particularly relates to surgery deals with tumors of the cord of various kinds and belongs to the surgical specialist but is of interest to the general surgeon in the matter of diagnosis. Syphilis of the cord comes in for a fair consideration.

bringing about a proper appreciation of the subject. There are other interesting clinics which we have not space to consider.

THE CLINICS OF JOHN B. MURPHY M.D.

Volume Five Number Four (Aug., 1916)
Octavo of 222 Pages, 59 Illustrations. Published Bi-Monthly. Price Per Year: Paper \$8.00; Cloth \$12.00. W. B. Saunders Company, Philadelphia and London.

There are thirty-three clinic cases reported in this number, all of unusual interest. In previous numbers we have been able to select some particular subject, one or more, having predominating features of interest but in the present number all present features of special interest and difficulty.

UNIVERSITY OF IOWA MONOGRAPHS

Studies in Medicine. Professor Henry Alberts, M.D., Editor. Volume One, Number One (June, 1916). Collected Studies and Reports Published by the University.

This collection of ten papers prepared by different members of the Faculty is evidence of the growing activity of the University Medical School. The fact that these papers are collected by their authors from journals of the first class where they first appeared, is a credit to the school in that the authorized output was prepared for the larger and more critical audience. The papers are clinical papers and will prove helpful to the general practitioner. They will serve to keep us in touch with the work of the University.

The first number comes to us without an introduction but we assume it is the purpose of the Faculty organization to continue to issue these numbers from time to time. We trust the profession will give an encouraging support to the undertaking.

THE MEDICAL CLINICS OF CHICAGO

Volume 2, Number 1. (July, 1916) Octavo of 220 Pages With 41 Illustrations. W. B. Saunders Company. Philadelphia and London. Price Per Year; Paper \$8.00; Cloth \$12.00.

We have before us the first number of the second volume of the Medical Clinics. The promise of the second volume is equal if not greater than the first. In addition to the familiar names of the contributors of last year, some new contributors whose names are quite familiar to the reading profession, particularly Dr. Arthur Edwards who contributes the first paper "The Use of Digitalis." The predominating value of digitalis in the treatment of heart disease has led clinicians to study the effect of this agent in diseases of the heart with great care, and we have in this paper the particular observations of Dr. Edwards.

A clinical presentation of diabetes in various relations occupies some forty pages of text by E. Tice and Solomon Strouse; diabetes with acidosis, diabetes and surgery and diabetes and pregnancy. This constitutes an interesting study.

Another interesting study is presented by Dr. Truman W. Brophy, under the head of Oral Infections. A study of this kind under the hands of so distinguished an authority as Dr. Brophy, appeals to us at this time in a peculiar manner.

There is another valuable paper or clinic by Dr. James T. Case on "The Principles of Fluoroscopy of the Stomach." At this time when there are so many amateur attempts to exploit the stomach by the roentgen ray, a study by a master is helpful in

GYNECOLOGY

By Dr. E. C. Dudley and Dr. Herbert Stowe. Pediatrics and Orthopedic Surgery. By Dr. I. A. Abt and Dr. John Ridlon. Volumes four and five. Practical Medicine Series for 1916. The Year Book Publishers, Chicago. Price \$1.35 Per Volume or \$10.00 Per Year for the Ten Volumes.

These little books bring up to date the literature of the year, and are rendered additionally valuable by the editorial comments.

GENERAL MEDICINE

Volume One; Series 1916; Practical Medicine Series. Year Book Publishers, Chicago. Price \$1.50 or \$10.00 for Ten Volumes.

The review of medical literature for 1915 concerning general medicine is by Dr. Frank Billings of Chicago. It is a comprehensive review and will enable anyone to keep a grasp on the past year's work and advances.

EPISCOPAL HOSPITAL REPORTS

The Episcopal Hospital of Philadelphia.

Edited by Dr. Astley P. C. Ashhurst.

This is the third year the medical and surgical staff has issued such a volume. Interesting material is collected from each department and here given permanence. Interesting is the opening chapter on the history of anesthesia. Dr. Ashhurst contributes several chapters on bone and joint surgery. These are very practical. The chapters on gunshot wounds of the chest and of the abdomen, and on Cesarean Section, are timely.

This is a very creditable volume and might well be emulated by every large hospital.

UNITED STATES PUBLIC HEALTH SERVICE

Hay Fever and Its Prevention. By W. Scheppegegrell, M.D., President, American Hay-Fever Prevention Association, New Orleans, La., Government Printing Office, Washington, D. C.

UNITED STATES PUBLIC HEALTH SERVICE

Public Health Administration in Richmond, Indiana. A Report of a Survey to Determine the Incidence of Tuberculosis. J. C. Perry, Senior Surgeon, United States Public Health Service. Government Printing Office, Washington, D. C.

UNITED STATES PUBLIC HEALTH SERVICE

The Transmission of Disease by Flies. Earnest A. Sweet, M.D., Washington, D.C., Government Printing Office.

HOSPITAL EFFICIENCY

Among the essentials to an efficient hospital A. A. Howard, Boston (Journal A. M. A., Dec. 4, 1915), includes not only the cure of the disease but also its prevention, and he gives an account of the follow-up methods adopted in the children's medical department of the Boston dispensary, which supports a twenty-five bed hospital for children and has an outpatient clinic receiving over 14,000 visits a year. In the hospital it is held that especially in dealing with children the best results can be obtained only by safeguarding the health of the patient after discharge, and they have included in their responsibility the medical supervision of the child beyond the hospital or curative period. They have therefore adopted the plan of having a member of their social service staff visit the home of each patient and note its environment as regards location, hygienic conditions, social and economic circumstances. The information is used in planning the probable length of time of hospital treatment. After discharge if home conditions are suitable and if the family physician can take charge of the case, little else is needed, but if long and close supervision is necessary the patient may be referred to the nearest milk station or "well-baby clinic," where the nurse and physician at the

station can take the responsibility. In other instances, like chronic heart cases, if home conditions are favorable the district physician and district nurse may be asked to co-operate, and other patients requiring continued institutional care may be referred to a suitable chronic or convalescent hospital. In other instances the visiting physicians work out what seems to be the best plan for the child, utilizing existing agencies. The majority of the patients described are referred to the children's outpatient department of the dispensary, suitable home conditions being insured as far as possible after discharge. The visitor is responsible for the first visit of the patient to the outpatient department and after that the responsibility rests with the follow-up system. The return and continued supervision of patients is effectively secured by a visible file index, and follow-up visits by the social service department. Whatever the disposition of the case, each patient, as far as possible, is returned at three months and in one year for medical inspection by the physician having charge of the case in the hospital. The reasons for the adoption of this system of following up cases are given by Howard as follows: The number of children readmitted to the hospital because of reinfection, failure to convalesce properly, and intercurrent disease was very suggestive. It was felt that it was a loss of experience for a physician to terminate his knowledge of a case with the discharge of the patient from the wards, and bad for the patient to entirely lose touch with the physician familiar with the course of his acute illness. It was deemed poor economy to cure a patient only to have to do the work over again in a short time if that could possibly be avoided. These considerations led to a study of the home conditions, the results of which are published. Nearly 94 per cent. of the 745 patients discharged between May 1, 1913, and April 30, 1914, presented definite educational or home problems, conditions amply justifying the pains taken. This would indicate that other hospitals might well adopt a like system, to improve their efficiency. To be of real value, however, it must not be a mere negative factor, finding out the conditions periodically, but a positive one exercising control over conditions and bettering them.

THE RÖENTGENOLOGIST AND THE HOSPITAL

The great differences in the relations between the roentgenologist and the hospitals and different institutions, and consequent unsatisfactory conditions, are noticed by H. W. Van Allen, Springfield, Mass. (Journal A. M. A., Dec. 4, 1915). The growth of the application of the Roentgen ray he thinks responsible for this condition. When first taken up by the medical profession roentgenotherapy promised to be one of the most limited specialties, confined to the location of foreign bodies and the diagnosis and treatment of fractures, but now it has become one of the broadest specialties of medicine, involving treatment as well as diagnosis. Many hospital superintendents

and physicians have failed to keep up with the progress of this specialty and to know the kind of man required. A competent röntgenologist must have a good knowledge of medicine generally and also of the science of electricity and be familiar with photographic technic. With all these he must be able to acquire special skill in interpretation of röntgenograms and this requires a special faculty—almost an instinct. When people come to know what is required and the knowledge and expense it demands, the hospitals will have to make better provisions for their Röntgen ray department. Van Allen maintains that the fees of the röntgenologist for private patients should be the same as in his own private laboratory. Ordinarily hospitals should not retain more than 25 per cent. of the fee and he objects to the specialist selling his services to the hospital for an annual salary. His relation to the hospital staff should be the same as that of any physician doing special work and his report should be in the nature of a consultation rather than that of a laboratory report. It may be written, but he believes should be supplemented when possible by a verbal report, going into the various possibilities that may be recognized only by the röntgenologist in consultation with the clinician. The necessity for the preservation of the finished plate is insufficiently recognized. It is an accurate record of the condition at a given time and may later become of the greatest value either in treatment or medicolegally. No one should have free access to the files and if removed it should be signed for and credit should be given for its return. It legally belongs to the hospital or the specialist and if medicolegal proceedings occur the röntgenologist must himself identify the plate in court and he should have full control of the plate and the plate records and have entire charge of the department, which should be well correlated in all its branches.

During February the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

W. L. Cummings Chemical Co.:

Radium Bromide.
Radium Carbonate.
Radium Chloride.
Radium Sulphate.

Borcherdt Malt Extract Co.:

Borcherdt's Dri-Malt Soup Extract.
Borcherdt's Dri-Malt Soup Extract with wheat flour.
Borcherdt's Soup Powder.

NEW AND NON-OFFICIAL REMEDIES

Since publication of New and Non-official Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies:"

Lysters Prepared Casein Diabetic Flour—Milk casein to which has been added a leavening mixture, sodium chlorid and saccharine. Used in the form of muffins in diabetes, etc. Lyster Brothers, Andover, Mass. (Jour. A. M. A., Feb. 26, 1916, p. 653).

Antistreptococcus Serum Rheumaticus, Squibb—Produced from strains of streptococcus from the joints and blood of cases of rheumatism. The serum is intended for use in cases of acute articular rheumatism. E. R. Squibb and Sons, New York (Jour. A. M. A., Feb. 26, 1916, p. 653).

PROPAGANDA FOR REFORM

Hypochlorites in Infected Wounds—Dakin points out that he claims no credit for the "discovery" of the "new antiseptic." He explains that the "new antiseptic" was discovered by Berthollet in 1788. The solution used by Dakin and others is essentially the well-known Labarraque's solution or solution of chlorinated soda. The claims as to the efficiency of the various modifications which are being used in France and England are decidedly contradictory. The one conclusion which all results with the various hypochlorite solutions appear to justify is that hypochlorites, whether applied in an acid solution, in an alkaline solution or in a neutral solution, are of genuine value in the treatment of infected wounds. (Jour. A. M. A., Feb. 5, 1916, p. 430.)

Oxybon Declared Fraudulent—On January 15, 1916, a fraud order was issued by the postmaster-general against the Oxybon Company, Chicago. The Oxybon was one of the gas-pipe frauds, which included the Oxydonor, the Oxypathor, and the Oxygenor (Jour. A. M. A., Feb. 12, 1916, p. 526).

The Therapeutic Value of the Hypophosphites—At the request of the Council on Pharmacy and Chemistry, Dr. W. M. Marriott, Johns Hopkins University, has examined the evidence for and against the therapeutic value of the hypophosphites. Experiments were carried out to determine the "food" value of hypophosphites. The hypophosphites were introduced into medicine by Churchill in 1858 on the basis of an incorrect theory and utterly insufficient and inconclusive clinical evidence; their use has been continued without justification by any trustworthy evidence for their efficiency. By actual trial on human subjects Marriott shows that at least 85 per cent. of the ingested hypophosphites are excreted unchanged. Further, he holds that there is no proof that the remaining 15 per cent. is available to the organism. It is doubtful if there are any conditions in which the body suffers from lack of phosphorus. Marriott concludes that there is no reliable evidence that hypophosphites exert a physiologic effect; it has not been demonstrated that they influence any pathologic process; they are not "foods." If they are of any use, that use has never been discovered (Jour. A. M. A., Feb. 12, 1916, p. 486).

The Effect of Opium Alkaloids on Respiration—D. I. Macht has reinvestigated the effect of opium alkaloids on respiration. He divides the alkaloids

of opium in two classes: In the one class is morphine, the prominent sedative alkaloid, which may not interfere with efficient respiration when the dose of the drug is small. In contrast with this are narcotin, papaverin, narcein, thebain and cryptopin, all of which are stimulants and in large doses are excitants of the respiratory center. Codein belongs to the morphin class, though in large doses it may also excite the respiratory center. The action of mixtures of opium alkaloids is a summation of their individual effects. It thus appears that if the object sought is a reduction of the labored activity of the respiratory muscles in a given case, the drug opium itself or mixtures of its alkaloids are to be preferred to morphine alone. If, on the other hand, it is desired to diminish the excitability of the cough reflex mechanism, it seems that a simple substance, as morphine or codeine, is to be preferred (*Jour. A. M. A.*, Feb. 12, 1916, p. 514).

Fermented Milk—While there is no conclusive evidence that *Bacillus bulgaricus* is able to establish itself in the intestine in such a way that other bacteria are driven out, it is undoubtedly true that in many cases marked improvement has resulted from the ingestion of milk cultures made from it. It is by no means certain, however, that the results which have been obtained by the use of milk cultures have been attributable to any peculiar virtue in the organism itself. The beneficial effects of a sour-milk diet is attributable, perhaps, not so much to the bacteria contained in the milk as to the milk itself, which provides material for an acid fermentation in the intestine. Fermented milk is so well tolerated in many cases that their use should in general be encouraged from the standpoint of nutrient values, quite apart from the problematical "auto-intoxication" propaganda (*Jour. A. M. A.*, Feb. 19, 1916, p. 574).

Diarsenol—Diarsenol, Synthetic Drug Company, Toronto, Canada, is said to be chemically identical with salvarsan. It has not been examined in the A. M. A. Chemical Laboratory nor do any reports of trials appear to have been published which demonstrate its value or safety. As salvarsan is covered by United States patent the American agents for salvarsan will probably object to the sale in the United States of a substitute (*Jour. A. M. A.*, Feb. 19, 1916, p. 590).

Genoform—Genoform, advertised as a remedy for rheumatism, gout, neuralgia, etc., is marketed with the claim that it is split up in the intestines into salicylic acid, acetic acid and formaldehyd. The statement of composition is too indefinite to permit any real insight into its possible reactions, but even if formaldehyd is liberated in the intestines, Genoform could not have the properties which are claimed for it (*Jour. A. M. A.*, Feb. 26, 1916, 676).

Tanlac—Food Commissioner Helme of Michigan reports: "A new panacea for the cure of 'all ailments of the stomach, kidneys and liver, catarrhal affections of the mucous membranes, rheumatism, nervous disorders and the like' is offered to the public under the name of Tanlac. The label on the bottle

neatly avoids the pure drugs act by claiming to be only a 'tonic and system purifier.' An analysis of Tanlac in the laboratory of this Department shows the following: Alcohol 16.4 per cent., Glycerin 2.0 per cent., Licorice present, Aloes or Cascara present, Gentian present, Alkaloids (Berberin) trace. The presence of a trace of tartaric acid shows that wine is the base of this medicine. The 16 per cent. alcohol gives it the 'kick' that makes a fellow feel good and ought to fill a long felt want in 'Dry Counties.' Aloes is a laxative. Gentian is a bitter drug, a so-called tonic. If the reader wants to be cured by the Tanlac route at one-fourth the expense, let him get a quart bottle of good sherry wine. Then go to the local druggist and get 1¼ drams of glycerin and 2 drams each of aloes, gentian, licorice and cascara. Mix (if you wish) and you will have Tanlac so near that neither you nor the manufacturer can tell the difference. This formula will give four times the quantity found in an ordinary \$1 bottle of Tanlac (*Jour. A. M. A.*, Feb. 26, 1916, p. 676).

POLIOMYELITIS AND NEWSPAPERS

The subject of poliomyelitis has received, during the summer months, considerable attention at the hands of physicians and laity as well. Infantile paralysis, by which name the disease is perhaps more commonly known, is by no means a rare condition in Iowa, since sporadic cases have been reported in past years and in fact the history of the Mason City epidemic remains still fresh in the memory of many.

The unusual amount of space which the newspapers of the country have given to the recent epidemic in New York, and of which our own state papers have ever taken occasion to keep their readers well informed, has perhaps been the means of causing the laity to formulate an exaggerated conception of the prevalence of this disease. That the disease is a scourge to humanity, no one will deny; that it leaves the individual surviving its terrible onslaught in a crippled and handicapped condition, is indeed common knowledge; that the large per cent. of individuals attacked are of tender years has been shown by the statistics of the various epidemics occurring throughout the world; yet, with a full knowledge of the awfullness of this disease entity, little or nothing has been published concerning far more prevalent diseases, such as diphtheria, scarlet fever, pertussis, measles, pneumonia and other infectious and contagious diseases whose high mortality no one dares question, and whose serious after-effects are fairly well understood. In other words, has not the press given undue publicity to one evil, while others, fully as vicious but far more prevalent, have been given but little consideration owing perhaps to the commonness of diseases, which like the proverbial poor "are with us always?"

It will indeed be interesting reading when the history of the New York epidemic is completed and the same presented in scientific form, where stripped of

all extraneous material, and free from the glaring head lines and catchy write-ups so common to newspaperdom, the available facts will be given to the medical profession for their assimilation and digestion, and it is from doctors that the laity should obtain their information relative to such facts as are then known about polionmyelitis.

TREATMENT OF EPILEPSY

In an article on Epilepsy, with Special Reference to Treatment, read before the Neurologic Section of the A. M. A., the author, Dr. F. X. Dercum, after properly considering heredity, as a causal factor, made mention of the role played by toxic factors, such as alcoholism, syphilis, and other various infections occurring among the ancestry. Dercum maintains that undoubtedly there is a basic impairment of the germ plasma from some source. Pathology has little or nothing to offer in explanation of primary epilepsy, since no constant changes in brain tissue occur. In considering the treatment of this disorder, the author ably points out that specific treatment (and here the term "specific" does not refer to the meaning of the word as it is generally used; i. e., in connection with syphilis) is obviously out of the question. Considering the epileptic as one whose inherent makeup is defective and deviating from the normal, emphasis is placed on means whereby as nearly as possible the individual should endeavor to lead a physiologic life. The question of dietary measures, the advantages of free elimination, and the use of medicines are carefully considered. The author believes that the use of small doses of thyroid extract, from time to time, is of distinct advantage in some cases, while bromides will be found to be more efficacious, even in small doses, if sodium chloride is withdrawn.

SOCIETY PROCEEDINGS

The Appanoose County Medical Society met at Cincinnati, October 26th, the program being furnished by the Cincinnati doctors. A most enthusiastic meeting is reported.

The Audubon and Cass County Medical Societies held a joint session at Exira, October 11th. At the Theatre Palace the doctors were entertained by moving pictures from the American Association for the Prevention of Tuberculosis. Fourteen Cass county physicians and eight Audubon county physicians enjoyed the six o'clock dinner following which Dr. R. F. Childs, president Audubon County Medical Society called the meeting to order. The scientific program with general discussion was:

Treatment of Lobar Pneumonia—Wm. H. Haloran, Audubon.

Report of Case—Tumor of Pituitary Body—U. S. Mullins, Atlantic.

Cholera Infantum—What Should the Term Include—James Maynard, Adair.

Quarantine—R. A. Jacobsen, Exira.

The Cerro Gordo County Medical Society held their regular meeting October 25th at Mason City. Dr. V. A. Farrell, of Mason City, read a paper on Blood Transfusion. Conservative Surgery of the Nose was the subject of a paper by Dr. F. G. Carlson, and Dr. A. G. DeWeil read a paper on X-ray Diagnosis in Internal Medicine.

The annual meeting of the Clayton County Medical Society held at the court house, Elkader, October 3rd was one of the most interesting meetings in the history of the society. The attendance was large, and much interest and enthusiasm in county society work was manifested. Three new members were received into the society. The program was:

Cholelithiasis—E. Amelia Sherman.

Good Roads for the Doctor—J. D. Brownson.

Tuberculin Treatment in Lung Affections—J. A. Cahill.

What Can We Do to Better Our Society—C. W. Duffin.

The Jefferson County Medical Society for their October 5th meeting held a surgical clinic at the Jefferson County Hospital. The clinical case, A Complete Cleft Palate and Double Hare Lip, was conducted by Dr. C. W. Harned, of Des Moines. A large representation of the society with their wives as well as dentists and their wives enjoyed a 6:30 dinner at the Leggett Hotel. Following the supper Dr. Harned addressed the meeting.

The Linn County Medical Society met October 10th at Hotel Montrose, Cedar Rapids. On this occasion Dr. Emil G. Beck, of Chicago, was the guest of the society and presented a paper on New Methods in Treatment of Suppurative Bone Diseases and Empyema: Demonstration of Bismuth Paste Treatment. Dr. H. E. Pfeiffer, of Cedar Rapids presented a case. Following the program and discussion, a buffet luncheon was given by the officers of the society.

The annual meeting of the Tama County Medical Society was held at Elberon, October 5th. The officers elected for the ensuing year are: Wm. F. Bowser, Elberon, president; R. H. Whalin, Tama, vice-president; C. W. Maplethorpe, Toledo, secretary-treasurer.

At the meeting of the Polk County Medical Society held October 31st, Dr. J. T. Strawn read a paper on The Treatment of a Peptic Ulcer.

The subject of the paper read by Dr. Charles Ryan was: The Enucleation Method in Cesarean Section. Ten cases were reported with no infant mortality. In no case was extraordinary resuscitation measures necessary. The method employed was to enucleate *in toto*, the cyst, with its wall of chorionic membrane including the child, cord, amniotic fluid and the placenta at its area of implantation.

The enucleation is accomplished by stopping the

incision in the muscularis of the uterine wall. From there to the endometrium, the separation is completed with the blunt handle of the knife instead of the cutting edge. The line of cleavage between the endometrium and the chorionic membrane being reached in this manner the enucleation is then carried on from this point, care being exercised to keep the fingers of the gloved hand in a position parallel to both these structures.

The site of placental attachment is recognized by tactile sense (if it has not been previously ascertained by auscultation or palpation before the uterine wall has been incised) during the progress of the enucleation, and is reserved until the very last moment for detachment, when all the structures are separated, the cyst is immediately delivered intact into a basin in waiting between the patients limbs where the membranes are quickly opened, the child delivered head first, the cord clamped and divided, and the child given over to an assistant or nurse in waiting. The operator can at once begin sewing up the incision made in the wall of the uterus and the operation completed.

The indications for this procedure are the same as for the well known operation for Cesarean Section excepting the condition of infection in which the Porro is usually advised.

The advantages of this method would appear to be the utilization of the well known surgical principle of following the line of cleavage, which simplifies the procedure and prevents leaving any portion of membrane or placenta behind; there is a minimum amount of trauma to the endometrium, which reduces the possibility of infection, or reactionary inflammation; it is simple and easy in execution, more rapid, and as safe as the classical operation; it carries the membranes, placenta and amniotic fluid intact, away from the field of operation, keeping the amniotic fluid out of the abdominal cavity as advocated by many modern authors, and prevents soiling the field of operation; it gives a better control of hemorrhage as well as the entire surgical situation, since the uterus begins to contract the instant the contents are removed; it reduces the possibility of infection by eliminating the necessity of the operator going into the uterine cavity for the second time, for the removal, by twisting or blunt dissection with fingers, gauze, sponge, or towel, of the membranes and placenta.

Its adaption to high abdominal incision, especially for the intra-abdominal operation, when the incision in the uterus, if necessary may be made in the median line, over the fundus, instead of the anterior wall; and the operator can immediately without delay begin closing the incision in the wall of the uterus. Diagramatic drainings were shown to illustrate the details of the method.

At the Wapello County Medical Society meeting October 3rd thirty-four doctors sat down to dinner in the dining room in the new quarters of the Ottumwa Commercial Association as a measure of

"preparedness" before listening to their invited guest, Dr. Frank A. Ely, of Des Moines. The fact that Dr. Ely was an Ottumwa boy, added to the warmth of his welcome. Besides the large representation of the Ottumwa physicians there were present Dr. C. B. Taylor, of What Cheer.; Eppie McCrea, of Eddyville; James and Bonnell, of Fairfield; Torrence, of Blakesburg, Finch, of Pulaski; Henry, of Farson, and Russell, of Keosauqua. Dr. Arthur Charles Stokes, of Omaha, who was to have shared the evening with Dr. Ely and give the surgical treatment of Increased Intra Cranial Pressure was, to the regret of the society, detained by a professional emergency at the last moment.

Dr. Ely first discussed the physiology of the circulation of brain, of the film of cerebro-spinal fluid and of the mechanical effects of varying pressures in a tight box; i. e. the cranium; how pressure on the tentorium may so cut off communication between the cord and brain that a small tumor may give rise to marked symptoms. The essayist held that some experiments showed that some symptoms are not due to intra-cranial pressure, but rather to anæmia of the bulb. He defined increased intra-cranial pressure as one interfering with function. Choked disc, was considered, an important diagnostic sign. A short sketch can not do justice to the review given of the various causes, tumors, etc.; nor of the symptoms for localization of lesions. Syphilis must always be thought of and Wassermann tests of the blood and cerebro spinal fluid made. Dr. Ely's experience with the surgical treatment has been very disappointing, but he feels compelled to offer it to the patient as a means of assuaging pain and perhaps of saving eyesight. The importance of extreme gentleness and deliberation in brain operations was particularly dwelt on by the essayist and those discussing his paper.

The meeting of the Wapello County Medical Society on October 17th resulted as follows:

Dr. L. A. Hammer had been assigned to the subject of Malignant Diseases of Skin and Mucosa of Head and Dr. D. C. Brockman, Malignant Tumors of the Jaws, etc. The former described the characteristics of the epitheliomata of the face, noting they may be of the skin or mucous surface or of the borders between the two; that they may start from apparently insignificant lesions; lymphatics are not so frequently or so early involved in superficial as in deep lesions, nor is pain so commonly a feature. Growth may be single or multiple. Paget says 50 per cent. of these growths begin in lip, the upper lip is rarely the seat. Irritation is considered the provoking cause, i. e. pipe smokers cancer. Hyde held that the sun's rays are a cause,—also observing that these facial growths are more common in men (more exposed) and rare in negroes (protected by pigment). Points in differential diagnosis from lupus, syphilis and other growths were given. Sarcomata may arise from irritated nævi; also be secondary to growths elsewhere. One authority reports success in treatment by Fowler's solution hypodermically.

Dr. Brockman dwelt particularly on epulis and sarcoma. The epulis is an uncertain tumor, "always potentially malignant," as it varies from the firm fibrous type, usually benign, to the giant cell type, more tender, more rapid in growth, bleeding easily and often malignant. Location is usually between two cuspids or anterior molars and they are seen as a rule, in third or fourth decade of life. Scudder differs from all other authorities consulted, in saying that such growths originate on the lingual side of jaw. Many cases are on the border line between an epulis and sarcoma, the soft, rapid growing ones as a rule belonging to the latter class.

In operation for epulis, the teeth (which are frequently in bad condition) should be removed with a part of the jaw, leaving a bridge of bone at the lower edge of the mandible, if this structure is involved. The surgical treatment of all certainly malignant disease, it was agreed by both essayists, should be early and radical. In diagnosing tumors of the jaw, if the growth can be punctured, and a yellow liquid exudes, it indicates a dentigerous cyst, while if the interior is solid or semi-solid, it indicates a sarcoma.

The general discussion brought out admissions from some members that in the remote past they had tried paste treatment of epithelioma, in some cases, with success. Dr. W. C. Newell reported he has observed in a recent visit to Ochsner's clinic, that this operator burned deeply both epulis and sarcomas, using cutting instruments but little. There was a general assent to the experience of successful X-ray treatment on superficial growths of the skin of the face while Dr. Herrick states his observation to be that the moisture found on most mucous membranes is the reason for the poor success of the X-ray, when used on them. Dr. W. B. LaForce reported a series of twenty cases of facial epitheliomata successfully treated by X-ray. E. T. E.

NOTES FROM JACKSON COUNTY

It has been a long time since any of our professional brethren have had anything to say through the columns of our State Society Journal, and it rather seems as though we should not be forgotten altogether.

Professionally speaking, Jackson county is "still on the map" and is just as active in the welfare of our society as ever. Of course there has been the usual summer vacation exodus, and many of the members of the society are just getting fairly installed again. However, practice is assuming the usual business routine and everybody seems to have profited from their vacation trip. Among the physicians of Maquoketa, who have been absent during some portion of the summer, are Drs. F. V. Johnson, L. B. Carson, D. N. Loose, Bowen & Bowen, J. O. Ristine, Lowder & Lowder and L. L. Riggs, each of whom have been accompanied by their families and were absent various periods of from two to four weeks. Some visited at their old homes, while others went to Lake Geneva, Wis., or made eastern tours by automobile, and unfortunately happened to be

through districts quarantined for infantile paralysis, and the quarantines being so rigidly enforced, created no little difficulty for all automobile tourists. The "closed roads" where government roads are being built, occasioned many miles of detouring, which was also very provoking as it created more expense and many unavoidable delays.

However, we are all back at our posts of duty ready for another year's business. As we have not had a regular meeting since the mid-summer session called at Bellevue and which was poorly attended on account of bad weather, there has been no information gained as to the activities going on in professional circles in other portions of the county, therefore no report can be given in a personal way concerning the doctors. We are glad to state, that to best of our knowledge there has been no vacancy in our ranks except one, the late lamented S. M. Littlefield of Andrew, Iowa, and there are but few ailments at the present writing.

We have had the usual experience other county societies have had with illegal practitioners and we thoroughly wish legislation would prohibit this menace to the profession, by either suppressing them altogether or requiring of them a standard system of education, which would give them legal access to practice and stop the rabble of uneducated and unprincipled sign displayers and thereby relieve the unsuspecting public from the throes of misconceived ideas. It has become very annoying to state and county officials to be compelled to deal with these unlawful practitioners, as it often requires the signatures of men legally qualified, yet not justified to act in the specific case on their behalf, that quarantines, death certificates, etc., can be properly executed, for the benefit of the sorrowing and afflicted, and to further protect all interests pertaining to the general welfare of the public.

A mild epidemic of infantile paralysis occasioned the closing of Maquoketa's public schools but it was only for a very short period, and now we have no cases immediately within the city and but an occasional one in the county.

We have another most important issue which will occupy our attention for the next four weeks and it evolves upon the general public to take a concerted interest in its promotion as well as for the medical profession of the county. It is the county hospital project and every step is being actively taken that can be to bring before the people of Jackson county evident facts of the real need for this county institution. We fully realize the uphill work other counties have experienced in adopting legal rights to proceed with the erection and maintaining of such a public institution, but where it becomes a dire necessity as in Jackson county, there being no other institutions of the kind in the county, it rather behooves both laity and profession to join hands in so needful a cause. Let every voter therefore favor this project, as it will further the interests of the general public and give to them something that will do them the greatest amount of good. The taxpayer will

barely appreciate the increased taxation, it being so small annually, and the total covers a period of several years duration, which will not necessarily burden the highest contributor and should he require the care of one sick relative or friend, he will be fully repaid for his investment.

Upon request, Dr. Howard of the chair of medicine of the State University, was recently with us professionally, looking after the infantile paralysis situation and the society expects soon to entertain Dr. Kepford while making his tour of the county on a tuberculosis campaign and other interests. The society is delighted that it is fortunate in getting this able man at such an opportune time.

Our society expects to convene in the near future with a vast amount of business to transact and don't forget, you will hear from us quite frequently in the future.

L. L. RIGGS, President.

The Fort Madison Medical Society held their regular meeting October 30th. Papers were read by Drs. E. D. Price and F. C. Roberts. Dr. J. P. Kaster, of Topeka, Kansas, was the guest of the society, and gave an interesting and instructive talk on enactments of medical legislation and other subjects of interest to the profession.

The Tri-State Medical Society held their annual meeting at Kansas City, October 26 and 27. There was the usual representative attendance and excellent program. The officers elected for the coming year were: President, G. Wilse Robinson, of Kansas City; vice-president for Iowa, C. S. Chase, Iowa City; secretary, Chas. H. Parks, of Chicago. The 1917 meeting of the society will be held at Iowa City.

The regular fall meeting of the Iowa and Illinois Central District Medical Association was held at the Rock Island Club, Rock Island, October 12th. The program was:

Fractures of the Os Calcis—P. A. Bendixon, Davenport.

Health Insurance, Its Influence on the Medical Profession—W. D. Chapman, Silvis.

First Aid Instruction and Demonstration of the Triangular Bandage—H. W. Gentles, Chicago.

Head Injuries—William Hessert, Chicago.

The Des Moines Pathological Society held a stated meeting at the Hotel Chamberlain on the evening of October 27th. After a seven o'clock dinner which was very largely attended, the business affairs of the society were disposed of and the following officers elected for the ensuing year: President, Dr. Ralph H. Parker; vice-president, Dr. John H. Peck; secretary-treasurer, Daniel J. Glomset.

The program consisted of talks by Dr. James Taggart Priestley and the outgoing president, Dr. C. E. Ruth. Dr. Priestley chose as his subject a Trip through the South Sea Islands from a Social and Non-Medical Viewpoint. To those who know Dr.

Priestley and his love for travel, it is superfluous to state that his narrative of the events of his summer's outing was delightful, interesting and instructive. To those who perchance may be unacquainted with Dr. Priestley, there remains to be stated that a rare and instructive treat is ever bestowed upon the listener who happens to fall within the sound of his voice. The members of the Pathological Society will ever consider it one of life's privileges to have known James Taggart Priestley, physician, scholar, and traveler.

Dr. C. E. Ruth gave a very practical talk on medical and surgical practice in Porto Rico. Various tropical diseases were discussed by the speaker and in many instances lantern slides, illustrative of the same, were presented.

The annual meeting of the Southeastern Iowa Medical Society was held at Hotel Muscatine, Muscatine, October 19th. While the attendance was not so large as anticipated, on account of the weather, nevertheless there was a large representation of members and guests and a successful meeting culminated. The session was called to order by the president, E. T. Wickham, of Washington. The scientific program was:

President's Address—E. T. Wickham, Washington.

How Can We Do Better Doctoring in the Country?—J. Fred Clarke, Fairfield.

A Retrospect—E. H. King, Muscatine.

Report of a Case of "Purpura Hemorrhagica"—H. A. Leipziger, Burlington.

Some Clinical and Therapeutic Aspects of Poliomyelitis—C. P. Howard, Iowa City.

The Value of the Obstetrical Forceps—W. L. Allen, Davenport.

The Diagnosis of Extra-Uterine Pregnancy—Carl W. Wahrer, Ft. Madison.

A sumptuous dinner was enjoyed by the members and guests at 12:30 P. M., Dr. F. H. Little, of Muscatine, acting as toastmaster. The toasts and responses were: "The Family Physician," J. F. Clarke, Fairfield; "The Modern Physician," C. P. Howard, Iowa City; "The Doctor's Wife," W. L. Allen, Davenport.

The wives of the local physicians entertained the visiting ladies with automobile rides and a musical at the Muscatine Launch Club. The officers elected for the ensuing year are: President, C. P. Howard, Iowa City; vice-president, E. H. King, Muscatine; secretary-treasurer, C. W. Wahrer. The next meeting of the society will be held at Fairfield.

The Northwestern Iowa Medical Society, including the counties of Sioux, Lyon, Osceola and O'Brien, held their October meeting at Sheldon, the 25th. A most interesting meeting, largely attended is reported. A banquet at the Arlington Hotel was enjoyed after the program. The following program was carried out:

Some Post-Partum Accidents—D. G. Lass.

Meningitis—Edward M. Williams, Sioux City.

Myositis Ossificans—With presentation of case—
E. W. Bouslaugh.

Legislative Matters—B. L. Eiker, Leon, of the legislative committee of the State Society.

Conservative Treatment of Epididymitis with report of case—G. E. Vermeer.

Cystic Disease of the Chorion—J. G. DeBey.

MEDICAL NEWS

Dr. Carl Mulky, of Knoxville, has gone to Cleveland, Ohio, where he will take several months post-graduate work.

Dr. H. H. Dittmer, of Manchester, Lafayette Higgins, of Des Moines, Drs. Henry Albert and M. F. Boyd, of Iowa City, attended the meeting of the American Public Health Association held at Cincinnati, Ohio, October 24 to 27. Dr. Albert presented a paper on "Bacterial Changes in Uniced Specimens of Water with Demonstration of a New Water Container for the Transportation of Iced Specimens of Water for both Chemical and Bacteriological Examinations." Dr. Boyd presented a paper on "The Teaching Laboratory in Public Health Work." Dr. Albert was elected chairman of the laboratory for the coming year.

Iowa was well represented at the recent meeting of the American College of Surgeons and the Clinical Congress of Surgeons held in Philadelphia. Among those present from different parts of the state were: C. L. Campbell, Atlantic; P. A. Bendixen, Davenport; Earl Bellinger, L. L. Henninger, M. E. O'Keefe and A. V. Hennessy, Council Bluffs; W. L. Hearst, Cedar Falls; C. B. Taylor, What Cheer; L. G. Patty, Carroll; E. F. Talbott, Grinnell; J. F. Herrick, S. A. Spilman and B. D. LaForce, Ottumwa; J. E. O'Keefe, W. B. Small, E. L. Rohlf, F. T. Hartman, and Guthrie McConnell, Waterloo; O. J. Fay, F. E. V. Shore, C. M. Werts, and W. W. Pearson, Des Moines, and others.

Dr. Henry Matthey, of Davenport, after two years' service as chief surgeon of the German Military Base Hospital at Braunsberg, Prussia, has returned and will resume his practice in Davenport. In connection with his work at the hospital, Dr. Matthey has witnessed the results of the great advancement in modern medicine and surgery. In fact the hospital work has not only demanded the highest skill of the medical profession but has developed unprecedented possibilities along medical and surgical lines to such an extent that a very large percentage of the wounded are enabled to return to the front.

At the meeting of the American College of Surgeons and the Clinical Congress of Surgeons held in Philadelphia, October 23 to 27, twenty medical societies and forty hospital organizations acted as host. The headquarters were at the Bellevue-Stratford Hotel. At the meeting of the American College of Surgeons the question of the development of a closer relationship with the surgeons of North and South America was considered and a committee, composed

of leading surgeons, appointed to visit the South American republics for the purpose of working out a spirit of co-operation. The officers elected were: President, Dr. George W. Crile, Cleveland; vice-presidents, Dr. Robert G. LeConte, Philadelphia; Dr. Rudolph Matas, New Orleans; secretary, Dr. Franklin H. Martin, Chicago, and treasurer, Dr. Albert J. Oschner, Chicago.

At the Clinical Congress of Surgeons over 1600 members were registered from the United States and Canada. The 1917 meeting will be held in New York City.

CHANGES OF LOCATION

Dr. A. A. Ashby, of Red Oak, has removed to Sioux City where he will continue his medical and surgical practice.

Dr. E. E. Morton, of Ayrshire, has removed to Des Moines.

Dr. J. L. Stattler, of Granger, has located at Cantril.

Dr. R. F. Luse, of Camanche, has removed to Low Moor.

Dr. H. H. Sievers, of Manning, has removed to Tama, his former location.

Dr. Paul Stookey, of Lamoni, has sold his practice to Dr. Peterson, of Kellerton.

Dr. L. E. Maker, of Grimes, has removed to Sac City.

Dr. E. W. Warner, of West Union, has removed to Lamont.

Dr. A. Livingston, of Fennimore, Wisconsin, has located in Livermore.

Dr. Freda M. Clark, of Oakland, has sold her practice to Dr. M. E. Shriver, and will remove to Benson, Nebraska.

Dr. James A. Wagner, of Alton, has sold his practice to Dr. E. M. Thies, of Sigourney.

Dr. S. M. Magarian, formerly of Melcher, has moved to Knoxville, and has associated himself with Dr. Carl Mulky in the practice of medicine.

MARRIAGES

Dr. Edwin E. Wuttke, to Mrs. Margaret Young Waight, both of Sumner, at Des Moines, October 18.

Dr. Henry C. Schmitz, of Marshalltown, to Margaret A. Rourke, of Sterling, Ill., at Sterling, October 10.

Dr. George W. Kester, to Miss Mamie Wessling, both of Grand Junction, October 11.

Dr. John J. Murphy, to Miss Helen Fitzpatrick, both of Danbury, October 2.

Dr. John William Hubbard, of Columbus Junction, to Miss Delia Brown, of Eldon, October 4.

Dr. A. W. Patterson, of Fonda, to Miss Edith Haffele, of Lincoln, Nebraska, October 28.

BIRTHS

Dr. and Mrs. A. H. Jastram, of Remsen, October 1, a son.

Dr. and Mrs. P. J. Sherlock, of Lockridge, October 21, a son.

DEATHS

Clarius Confucius Birney, M.D., age sixty-nine; Rush Medical College, 1874; a practicing physician at Mason City for a number of years; died at his home October 12 from Bright's disease. He is survived by his wife, two daughters and one son, Dr. C. E. Birney, of Estherville.

Marion Boone Coltrane, M.D., age fifty-eight; a practicing physician for a number of years at Macksburg; died at his home after a lingering illness August 25.

Phil C. Naumann, M.D., age fifty-five; State University of Iowa College of Medicine, 1861; a practicing physician at Burlington for a number of years; died suddenly of apoplexy October 16.

Herman F. Stempel, Sr., M. D., age ninety-two; born and educated in Prussia, coming to this country and locating at Ft. Madison in 1847; practicing medicine in that locality for a number of years; honorary member of the Ft. Madison Medical Society; died in Ft. Madison, October 27.

Edgar C. Malin, M.D., age sixty-three; State University of Iowa College of Medicine, 1890; Fellow of the American Medical Association; member of Iowa State, Austin Flint-Cedar Valley and Humboldt County Medical Societies; a charter member of the Humboldt County Medical Society; a practicing physician at Livermore for twenty-six years; died at his home in Livermore, October 23 from pneumonia. Members of the Humboldt and Kossuth County Medical Societies attended the funeral services in a body.

HOSPITAL NOTES

Mercy Hospital, Des Moines, numbers among its internes, Dr. Paul R. Tang, a graduate of the College of Medicine of the State University of Iowa. Dr. Tang is a native of China, coming to this country a few years ago from a Methodist mission. He will return to his native country next year to practice medicine.

The Iowa Miners and Industrial Hospital, of Des Moines, has been purchased by the Presbyterian Synod of Iowa. The building is being remodeled to suit the purposes of a modern, up to date hospital. An out-patient department is already in operation. A fine X-ray equipment has been installed. There will be a training school for nurses. The Presbyterians will leave nothing undone in their plans for the es-

tablishment of a thorough equipped hospital in every respect.

GOLDEN JUBILEE OF BATTLE CREEK

A number of physicians attended the Golden Jubilee of the Battle Creek Sanitarium on October 3, 4 and 5. The exercises included incidentally a night pageant and a morality masque, but consisted chiefly of a series of conferences on health and race betterment subjects. Ex-Secretary William Jennings Bryan addressed a huge meeting in a big tent on "National Health and National Prosperity." Dr. A. P. Biddle, president of the Michigan State Medical Association, spoke for "The Medical Profession" and Dr. Ray Stone, of Battle Creek, for "The Physicians." One of the most interesting figures at the Jubilee was Dr. Stephen Smith, of New York City, who was honorary president of the conferences. Although ninety-four years old, Dr. Smith read a paper on "1866—A Year of Great Epochs in Race Betterment." His long and eminent services in his profession both public and private, fairly entitle him to be called "The Grand Old Man of American Medicine."

Dr. John Harvey Kellogg, who for forty years has been superintendent of what has now become the largest sanitarium in the world, welcomed the guests and recounted what had been achieved in the fifty years of the institution's existence.

In connection with their fiftieth anniversary, Parke, Davis and Company, Detroit, issued a booklet souvenir, "Fifty Years of Manufacturing Pharmacy and Biology." The booklet gives a history of the growth and development of the "House of Parke, Davis and Company" from its meagre beginnings in 1866 to the present time when it has branches not only in thirteen of the largest cities of the United States but also in London, Bombay, Sidney, Petrograd, Buenos Ayres and Havana. "The Story of Fifty Years" is demonstrative of accomplishments in original scientific investigations, and affords interesting as well as profitable reading. The story closes with a expression of appreciation for the confidence, co-operation and support of those whom they serve. The booklet is beautifully illustrated and is a credit in every respect.

The requirements of a special diet for diabetics has led to the addition of several new foods to the menu of the Battle Creek Sanitarium. Bean sticks are largely used. They are made from the Soya bean and contain no carbohydrates, while showing a high content of protein and fat. The root of the lotus, a water plant, and a species of lily also yield a food lacking carbohydrates, but the nutritive value is less than that of bean sticks. Bamboo shoots are also served, but they contain a small amount of carbohydrates.

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THEN AND NOW

HENRY H. CLARK, M.D., McGregor

Oration on Surgery—Iowa State Medical Society

An invitation to deliver the Oration on Surgery at the annual meeting of the Iowa State Medical Society, came to me as a very great surprise. I felt that I was not entitled to the honor for several reasons, but especially because I had not been a regular attendant. My first thought was to decline and I should have done so if a number of able and faithful members had not urged me to accept. At their suggestion I decided to at least make an attempt to keep you gentlemen awake for a short time and to accept the honor in the spirit in which it was given, the spirit of democratic hospitality which distinguishes the profession of our country from that of all others.

In the year 1870, armed with a diploma from the Chicago Medical College, and the experience of services as interne in Mercy Hospital, I bade adieu to Chicago and turned my face westward. At Dubuque I heard of the growing importance of the up-river town, McGregor, and on a Sunday morning in April straddled my little bay horse, my only worldly possession of value saving a few books and instruments, and set forth across country to look over the chances the new town had to offer a bright and aspiring young physician. I rode into McGregor just as the church bells were ringing for evening service. That was forty-six years ago. I have been there continuously since with the exception of a couple of days absence now and then to attend a medical meeting or similar form of recreation.

At the time I came, McGregor was a hustling little city of 4,000 population. There were nine doctors in the town but a clinical thermometer was unknown. Dr. Frederick Andros was the only one who could boast of a hypodermic syringe. Dr. Andros had been the first member of our profession to penetrate the wilderness that in 1837, the year he came to northeastern Iowa, lay north of Dubuque. He had built the first house at Garnavillo, the county seat of Clayton county, which at the time comprised all the terri-

tory from Turkey river north to the Canadian border and west to the Rocky mountains.

After years of practice at the county seat and some service as physician for the Indians at the Yellow river and Fort Atkinson missions, the doctor had finally located at McGregor. There he soon became recognized as the surgeon not only for the town but the surrounding country for many miles. Was an amputation necessary or did a man get a bullet hole in him in a saloon brawl or a street fight, Andros must be sent for; in fact, he was the only man thought of when a surgeon was required.

A few days after my arrival I called on the Doctor, then nearly seventy years old, and presented my credentials. He gave me the glad hand and we became firm friends.

Some months before he had met with an accident which had severely impaired the strength and usefulness of his right hand. My association with him was therefore fortunate, for, while he was the surgeon and received the credit if any were due and the emoluments if such were forthcoming, I did the work and gained the experience.

Our association continued in this manner for about ten years when the Doctor decided Iowa was getting too civilized and tame and went west to grow up with the country. He was then eighty years old. After practicing in Dakota for ten years, he changed his residence to Minneapolis where he died at the age of ninety-one.

Dr. Andros was far superior in intelligence and ability to the average physician of his day but he was a typical frontiersman and something of a character. I remember a country drive I took with him a short time after I came to McGregor. He drove a good horse but he interfered so badly that either his right or left hind leg seemed to be in the air all the time. As we were jolting over a rough road back in the Mississippi hills the Doctor suddenly stopped his horse with the remark, "There's the damndest nicest spring over there you ever saw." We got out and walked over to where a fine stream of water gushed from the rocks and formed a pool about three feet in diameter and eighteen inches

deep. The Doctor took off his high silk hat which he always wore and in which he carried his letters, red bandanna, cigars, stethoscope and always either a clean or dirty collar, pulled off his coat, rolled his sleeve to his elbow and thrust his hand to the bottom of the spring. After lifting aside a few stones he pulled out a flask of whiskey. He uncorked it, took a generous drink and then returned the bottle to the bottom of the spring for future use.

If there is any particular reason why during my work of forty-six years in McGregor I have done more or less surgery, it is in all probability due,—no, not to Dr. Andros' bottle in the spring, but to the fact that he was growing old, had a crippled hand and was my friend. The truth is that inasmuch as no one in my locality until very recent years gave anything like especial attention to surgery, the field was largely mine and so, while I claim no expert knowledge and have never posed as a surgeon, I have taken care of a large number of surgical cases and have sometimes been called a surgeon. I need not tell you that such is not now the case and later on may give you a hint as to the why and wherefore.

Now, gentlemen, in conversation with a distinguished member of this society a short time ago, I asked him to tell me why I was selected to deliver the Oration on Surgery on this occasion to a society that can boast of surgeons the equal of any in the land. He answered, you have been in practice nearly fifty years and were doing surgical work before a large per cent. of its members were born. For that reason it was thought you would be able to present something in the way of experience that would be interesting.

Following the cue the Doctor gave me, I have chosen as my topic, "Then and Now." Perhaps when I have finished you may conclude that I was in the same condition as the Irishman who was sent to the barn to saddle a horse. After a tiresome wait, Pat appeared leading the horse but the saddle was on hindside before. When asked "why the Divil he put it on that way" he replied, "How in dunder did I know which way you were goin'?"

You may ask for a definition of the terms "Then and Now." When does "then" end and "now" begin or how far back does "now" extend before it encounters "then." We might go back to 2000 B. C. when the code of Hammurabi who reigned in the Tigris-Euphrates Valley provided that if the patient died, the surgeon's hands should be cut off. If the patient happened to be a slave, the doctor must replace him with one of equal value. In the event of the loss of a

slave's eye, the owner must be recompensed for half the slave's value. The contrast between Hammurabi's time and ours is striking enough, yet one sometimes almost suspects that modern juries, if given unlimited power, might not be much more lenient.

It is recalled at what great price the fundamentals of the surgical art were won. In this connection one thinks of Andrew Veselius, the memories of whose student days still haunt the stricken city of Louvain, working out his anatomical knowledge on the bodies of animals because of the great difficulty of getting human cadavers at that time for the purpose; of Ambrose Pare, demonstrating the use of the ligature, a matter of as much magnitude in that day as the performance of an intricate abdominal or cerebral operation at the present time, and probably more beneficial than some of them; and in our own America, of Ephraim McDowell performing the world's first ovariectomy while the farmer neighbors of the patient, waited outside the cabin with pitchforks ready to mob him when he came out, and his professional brethren stood ready to follow him to his grave with calumny and prosecution.

Coming down to what I suppose may be considered our own era, three potent factors, as it seems to me, have been responsible for what is called a surgical renaissance,—the discovery of anesthesia, the impetus given to pathology by Rokitansky and his followers and the dawn of the germ-studying and germ-fighting period.

The surgery of the preanesthetic times was largely of the extremities and superficial parts of the body and did not demand, generally speaking, a large degree of knowledge or technique. With the coming of narcosis and antisepsis, men peered into the abdomen and discovered a new surgical continent. Since then, led largely by animal experimentation, the mysteries of the peritoneum have almost all been solved and surgery is turning to the chest and cranial cavity in search of new fields to conquer.

By far the most important epoch in the entire history of surgery is the last half century. My experience in the profession has embraced nearly the whole period and as I look back on conditions as they were in 1870 when I began my work in McGregor, I am lost in amazement and admiration at the stupendous strides that have been made.

In 1870 the antiseptic period had barely dawned. I think of it as the carbolic acid age because at that time carbolic acid stood at the head of the list and it is still an open question with me whether it did more good or harm.

There was little abdominal surgery done outside the hospitals in the large cities and only by men who had become eminent in the profession. Aside from this the surgery of the country was done by the general practitioner. In fact, even as late as 1878, Gross said, "There is not a man in this continent who devotes himself exclusively to surgery."

We had few hospitals except in the large cities. The nearest to my town was in Dubuque and little was known of it. Without hospital facilities, with the limited knowledge of surgery and antiseptics of those days and without the thousand aids which are at the command of the modern surgeon, we were confronted with difficulties and obliged to rely on our own resources to a degree that the modern surgeon can little appreciate.

In numerous cases I have been called upon to care for a railroad man with a crushed arm or leg or other serious injury in some vacant room which had been hastily procured for the purpose. More than once I have actually used a shovel to get the dirt out of the place. Having cleaned up the best I could, the next thing was to get hot water and many times an ordinary wash boiler was used for the purpose. A little carbolic acid or a quantity of boracic acid was added.

I might give you the history of a number of cases in which double amputations were made with the above preparations and no assistance except that of a friend of the injured man who gave the anesthetic, and the patient made good recovery. It is necessarily difficult for a young surgeon in this day and age to believe that favorable results could have been obtained in this crude way and I confess that as I look back over my work, I too wonder why more of my patients didn't die.

I recall one case in particular. On a cold winter evening I was summoned to attend a man in the country who had received a severe injury. On reaching the place I found a young fellow about twenty years old and weighing a couple hundred pounds, lying on the floor in an accumulation of dirt and clutter of a sort of shop over a corn crib. The right frontal region of his skull was crushed in a frightful manner. He had attached a gasoline motor to a large grindstone in the shop. Soon after starting it the stone had exploded and a good sized fragment had struck him in the head.

In those days of no rural telephones and no automobiles, over two hours had elapsed before I reached him. The wound was bleeding profusely and without making any attempt to move him, I cared for the man just as he lay there on

the dirty floor. A couple of kerosene lamps furnished the light, nothing in the way of antiseptics was used and the water was brought in a wash boiler from the kitchen of his home several hundred yards away. I removed a large number of pieces of bone and at least an ounce of brain substance and closed the wound with silk suture material. The patient was in profound shock with cold, clammy sweat and pulse almost imperceptible.

After the dressing had been made, we placed boards from a side door to the ground and on these as a slide removed the man from the corn crib and carried him to the house. By all odds he ought to have died but he didn't. After seventy hours he regained consciousness and from then on made an uneventful recovery. When last heard from, he was a policeman in Waterloo. Perhaps some of you Waterloo doctors have noticed a uniformed gentleman on your streets who has a caved-in place on the right side of his head.

I do not mention this case because I think it reflects any particular credit on my surgical ability but merely to show the difficulties we men of the older generation often encountered in our work of caring for injuries. Compare the environment in which this patient was cared for and the kind of assistance I was able to give him with the environment of the modern hospital and the sort of care the gowned and gloved surgeon with his assistants and nurses, all the modern appliances and instruments and dressings thoroughly antiseptic. Yet no better results could have been obtained. Who will explain the why and wherefore or fail to appreciate Nature's reparative powers as often demonstrated in our science.

What a revolution in surgery has been brought about can only be appreciated when we compare the impunity with which surgeons now perform operations which in the pre-antiseptic era were regarded as either wholly improper or absolutely unjustifiable. The number and kind of operations performed today were undreamed of forty years ago, and the aid that surgery now is to the healing art and the prolonging of human life, can scarcely be over-estimated; yet are there not dangers in this constantly increasing spread of the use of the surgeon's knife.

Is it so long since I graduated in medicine that possibly I may have an erroneous idea of the instruction and training which young men now receive in our medical colleges but am I wholly out of order in saying that there are young men who hang out their sign today announcing themselves as physicians and surgeons who, though

they may have honorably completed a medical course, have not the necessary qualifications to do surgical work?

Is it not also true that whereas an eminent surgeon is likely to seek the aid of the pathologist and resort to every resource at his command to decide the question of the wisdom or value of an operation, young men equipped with a fresh new diploma and a fine display of instruments, can decide the momentous question in short order?

"Graduation from a medical college," says a distinguished surgeon, "is merely the commencement of a life study, therefore young men without special training under competent teachers should not be encouraged in wanton assaults in major surgical operations unless justified by necessity. The future will demand schools for advanced training for those who desire to do special work."

As the case stands now, I am led to believe from my own observation that many operations are made by men who have not the requisite qualifications, operations that ought not to be attempted except by men of the highest efficiency and the greatest skill. I also believe I am warranted in saying that the sum total of unnecessary operations is not a small one. In 1881 Prof. Humphrey said:

Treatment of wounds is undoubtedly not only the first stone but the cornerstone of surgery. By it surgery has attained its greatest triumphs; by it our branch of the profession has conferred its greatest benefits to mankind, by it each individual surgeon may hope to do more good than in any other way. Though it was the first work on which surgeons were engaged, it at the present day is one of the chief questions of surgery and I trust it will remain so.

Is there not truth in the statement that while surgery has attained a perfection not dreamed of thirty-five years ago when Prof. Humphrey wrote this, it has come to pass that the higher exercise of the surgeon's skill is directed to the making of wounds and too little attention is apt to be paid to the details of dressing and after-treatment? Operations are made in your city hospitals by eminent surgeons, operations so delicate and intricate that they were not deemed possible a few years ago but is there not a tendency toward leaving the after-cure too much in the hands of inexperienced assistants? The large number of hernias following abdominal operations warrants me, I believe, in at least suggesting that such may be the case.

I presume to say that there are students from our colleges who are thoroughly versed in the technique of difficult operations who are not

able to apply a neat dressing or proper bandage, nor do they with all their aseptic and antiseptic knowledge give as careful attention as they should to the treatment of minor surgical cases whether the injury is made with a surgeon's knife or by accident. I venture the statement because many years of experience have taught me the importance of careful dressing of even the simplest wound.

I have thought, and it appears to me I am justified in so thinking, that the most important department of our art and science, and the department that should enlist the greatest skill, is that of the treatment and care of children; yet it sometimes happens that the young doctor in this day and age fails to grasp the truth of this and considering there is little of the heroic in the treatment of a baby, gives his main attention to seeking out an opportunity to distinguish himself by performing a surgical operation. Any man who has been in practice as long or even half as long as I have, can tell you something of interest along this line. I have felt on one or more occasions that a scene similar to that which was staged for Ephraim McDowell, might be justified.

I believe I am not far wrong in stating that but a small per cent. of our medical graduates are by nature qualified to undertake surgery of a serious nature. My prediction is, gentlemen, that in the future we will have a smaller per cent. of medical graduates who aspire to surgery and a larger per cent. of splendid physicians.

What else will the future have to offer? The question opens a field of interesting conjecture. Will it be possible by some device to operate on the lung as readily as one does now on a gall-bladder or stomach, and how far will we be able to go with the heart with greater knowledge and greater courage? As to the brain cavity, Harvey Cushing has suggested that there are brain tumors of so many varieties and the mechanical condition attending their development and removal is so varied that the surgery along this line may become quite comparable in magnitude to that of the abdomen. The dream of the transplantation of organs has not materialized. While it seems possible to unite bloodvessels, too many obstacles lie in the way of the physiological attuning of foreign tissues with their attendant problems of destructive inflammation, yet surgery of this nature still has a great deal to expect from biology.

We have gone far in the years that have bounded the period of my practice as an Iowa physician but yet as I recall the great advances that in the same interval have been made in

other departments of life, I am led to wonder if, after all, we have accomplished any more than the men of research, the inventors and the discoverers in other fields of human activity have. Is there any greater difference between the surgical technique of a century ago than there is between the stage coach of that time and a modern vestibuled fast express, between the ox cart and the automobile, the postal service of the horseback rider and that of the aeroplane. Men could not operate on the abdomen 100 years ago but neither could they build a Panama Canal or travel from Europe to America in six days, telegraphing from mid-ocean through the ether the date of their arrival.

It is possible we may have demonstrated the progressive qualities in the evolution of man to no greater degree than the leaders in other departments of life have, yet I believe we can safely say that in medical and surgical research we have at least kept abreast of all other arts and sciences and may trust to the men who are at work in our laboratories and clinics today to see that surgery and medicine go steadily and splendidly forward.

DENTAL FOCI OF INFECTION, THEIR CAUSE AND PREVENTION*

E. A. SCHRADER, D.D.S., Independence

Mr. Chairman and Gentlemen:—I appreciate the honor of being called upon to appear before you and I hope that I may so present the subject, that it may be of some value.

I believe that medicine in the future will consist largely in a search for foci of infection, and their removal, that instead of treating symptoms, as rheumatism, heart trouble, etc., it will be a search for the particular focus of infection causing that malady.

The following list of diseases is an exact copy taken from the Journal of the Research Committee of the National Dental Association. This Association is composed of the leading members of the medical and dental professions.

"Systemic Diseases Resulting from Oral Infections."

Arthritis Deformans.

Iritis and other Eye Troubles.

Focal and Diffuse Kidney Infection. (Nephritis or Bright's Disease.)

Blood Vessel Coat Disease.

Heart Infections, as Endocarditis and Myocarditis.

Stomach and Duodenal Ulcer, Appendicitis.

Liver Infections, including Cholecystitis and Gall-Stones.

Skin Diseases, including Erythema Nodosum and Boils.

Nervous System Infections, including Neuritis, Neuralgias, Tic-Douloureux, Sciatica and Herpes Zoster.

Glandular Infections including Thyroid, Pancreas and Lymphatics, etc.

Pneumonia and Lung Infections.

It is not claimed that foci of infection in the mouth are the most frequent or the most important. The mouth up to the past few years, and with many of the medical profession, still is completely ignored, but to make a thorough diagnosis for the cause of systemic disease, it should have a complete examination. We should do team work. The dentist and physician must work together.

When a systemic disease exists, due to focal infection, and the cause is not known, the teeth should be examined first, as there are more teeth than other parts to produce infection, and infection is more easily removed from the mouth.

It was thought that all teeth were healthy which were comfortable and performing the functions of mastication but the x-ray shows many such teeth diseased.

In some cases, there are rarefied areas over the apices of the roots, places where part of the bone has been absorbed. We do not know what germs these areas contain without a culture being taken.

The germs found in diseased areas about the teeth are according to Gilmer and Moody, mostly streptococcus, both viridens and hemolyticus, bacillus fusiformis, together with other organisms such as staphylococcus aureus, or albus, micrococcus catarrhalis, and in two instances, diphtheroid bacilli have been found. The streptococcus viridens seems to be the germ most commonly found.

Some of these rarefied areas exist, according to the Chicago Research Committee, where the tooth once had an abscess to cause this absorption, and was later treated and the root filled. Instead of filling in with bone tissue, it filled in with connective tissue, and contained no pathological germs. If a patient has some systemic disturbance caused by a focus of infection, and no other source has been found, these areas should either be curetted with the amputation of the end of the root, or the tooth extracted with curettement.

Dr. E. C. Rosenow has for some years been conducting a series of experiments which can leave no room for doubt, as to the culpability of the teeth and tonsils in the production of such systemic diseases as articular and muscular rheu-

*Read before the Delaware County Medical Society, Manchester, August 8, 1916.

matism, endocarditis, streptococcæmia, and other allied conditions.

Starting with a certain form of streptococci, Rosenow was able, by varying the cultural conditions under which he grew the organisms, to transform the original type into other types of streptococci which we have been accustomed to look upon as distinctly different from one another in their biological, serologic, and chemical characters. Not only was he able to produce different forms of streptococci, but he further changed streptococci into diplococci of pneumonia and vice versa.

The essential cultural factor which he used in bringing about these changes was a variation in the degree of oxygen tension. He showed that rheumatism, etc., were embolic in origin; that is, that a clump of organisms became lodged in a

root. It may cause an acute abscess, with severe pain and swelling, or a blind abscess with little or no pain, with no external evidence of trouble or may lie dormant for some time without any apparent trouble. Many times the aforesaid conditions are treated, but enough of the infection remains to leave a blind abscess with no outward manifestations, and which causes systemic disturbances. A number of dentists are taking up the method of ionizing the nerve canals which are infected, to not only disinfect the canal but to drive the sterilizing agent into the deeper tissues. According to our x-ray findings, rarefied areas will fill in with new bone, after being ionized, if they are not too extensive. If extensive, they can only be cured by amputating the diseased end of the root and curetting the affected area, or extraction and curettement.



Figure 1. Blind abscess on lower bicuspid. Imperfect root filling. Patient subject to headache much of the time.



Figure 2. Same as figure 1. Six months after bicuspid has been ionized and filled with a perfect root-filling. Note the new bone about apex. Headache much diminished after treatment. Third molar has been removed.

capillary loop which was too small to admit of its passage, and would locate in a given tissue for which the given organism had a particular affinity. If this was in a heart valve, an endocarditis resulted, if in the tendinous end of a muscle, a muscular rheumatism, if in the synovial membrane of a joint, an articular rheumatism. Teeth affected with pyorrhea, inflammation around ill fitting crowns and bridges, and impacted teeth are foci of infection found in the mouth.

Dead Teeth—The largest number of foci of infection in the mouth are caused by dead teeth. They may die from several causes, such as decay, a severe blow, hypercementosis, pyorrhea, and the dentist. If we could have the co-operation of the patient and dentist, there would need be but few places of infection from this cause. When the nerve dies from decay, it suppurates, forming a fine tube of pus to infect the tissues about the end of the

In case of extraction of teeth with blind abscesses, the tooth should not only be extracted but the diseased area curetted. These blind abscesses may cause the absorption of areas as large or larger than a pea, sometimes a half inch in diameter.

Teeth Devitalized by Dentists—This, I believe, forms the great majority of cases of focal infection. On this account nerve operations are condemned by many physicians, but the operation is not to be condemned so much as the manner in which it is done.

The late Dr. Eissen found in 1000 cases examined where teeth had been devitalized, .3 per cent. of perfect root canal fillings showed signs of disease. This may have been due to a lack of asepsis. He found 13 per cent. of perfect root canal fillings out of the 1000 cases.

Dr. Elmer S. Best found out of 3000 cases of

devitalized teeth, 10 per cent. of perfect root canal fillings.

In my own practice, of 155 devitalized teeth examined, twenty-four had mechanically perfect root fillings, 117 had mechanically imperfect root fillings, and fourteen had no root fillings. Of

ous opening. It is generally a blind abscess without any external evidence of trouble, but forming a focus of infection for some systemic disease, or nature may take care of it without apparent trouble.

We know that Nature is doing a great deal to



Bicuspid with imperfect root-filling, draining directly into antrum.

the perfect root fillings, one had a rarefied area over the root. Of the teeth with imperfect root fillings and no root fillings, 107 had rarefied areas.

When the nerve is entirely removed under aseptic precautions, and the root is sealed to the



Large cyst above molar. Tooth devitalized but no root-filling.

take care of these conditions, as nine out of every ten of the nerve operations are not perfect, and about 70 per cent. of these improperly filled canals have rarefied areas over them. So there are but few mouths that do not either have some of these imperfect nerve operations, some impacted teeth or pyorrhea as a source of infection,



Root between the first molar and second bicuspid. Extraction sixteen years previous. Was the cause of neuralgia.

end, there is little danger of infection from that tooth.

When the nerve is not perfectly removed, a small end remains which later decomposes and suppurates. It then infects the tissues about the opening at the end of the root, causing either an acute or chronic abscess with or without a fistul-



Pyorrhea pocket with instrument showing depth below level of gum.

and yet most of these people are healthy, but we do not know when these germs may become active and some systemic disease result.

You may ask, what right has the dentist to perform these nerve operations improperly, and who is responsible for these diseased conditions that have been caused by them?

We can only plead ignorance as our excuse and

add that we consider ourselves excusable in the past because we did not know and did not have the methods of doing perfect root-canal operations. Until recently we considered all nerve operations successful if they prevented further toothache.

Quoting an extract from Dr. Howard Raper's



Figure A. Perfect root-filling in left central incisor. Other central had been devitalized twenty years. No apparent trouble but patient had goitre. Note large cyst.

lecture at the Panama Pacific Dental Congress: "In the first place I take it that we can agree that there is such a thing as poor root-canal operations. In fact most nerve operations are of this kind. I do not agree with the man who says, 'Our nerve operations are a disgrace.' Mirl Stro says, 'It is no disgrace to wear rags, the disgrace lies in continuing to wear them.' The extensive use of the radiograph and the theory of infection has set a new standard. Methods which fulfill the requirements of the old standard, fail to meet those of the new, and consequently must be discarded, and replaced by methods which prevent instead of aid the development of foci of infection. This places the dentist in rather a difficult position." Dr. Henry Carr facetiously expresses it: "If he does his nerve operation as he has been doing it, he gives his patient heart-trouble. If he takes the time necessary and does it as he now believes it should be done, he gives his patient heart failure when he presents his bill."

If we do this work properly it will make the fee seem exorbitant and prohibitive; but if it is the only way to prevent these teeth at some time causing, in a certain per cent. of cases, rheumatism, etc., we must adopt the latter method or the patient run his own risk, that by saving a few

dollars and not have it done properly he might contract one of the many diseases which results from focal infections.

There are men who are placing no root filling in their nerve canals nor removing all of the contents, but relying on some paste to preserve that dead nerve. These teeth are a very frequent source of trouble and on making a culture from these supposedly mummified nerves, at a later time they are found to contain pathogenic germs.

I know of a case of an actress who left the road on account of severe headache. The x-ray showed three such filled teeth. On opening and draining these teeth, the headache ceased. In the light of our present knowledge I believe that such root canal work is criminal. Suppose some of these teeth would cause a painful case of rheumatism and heart trouble and on finding them devitalized with unfilled roots which the x-ray shows badly diseased, these are removed and the patient gets well. Is this not cause for criticism? Quoting what some other men have to say on this same subject:

Dr. M. I. Shamberg, Oral Surgeon of the Post Graduate Hospital and School of Medicine N. Y. "The sad reality faces us today that our hospitals are filled with patients who are bedridden, some



Figure B. Same as figure A immediately after root has been perfectly filled and amputated and cyst curetted.

crippled for life and aye! many of them dying, as a result of focal infections about the teeth and jaws.

There is no longer any question as to the large variety of systemic diseases that are due to oral infection, and herein lies the great problem before us today. In the cases of polyarthritis

where structural changes have taken place within the joints, and atrophy of the limbs have resulted from prolonged non-use, only slight improvement will take place because the injury is too great to permit of repair. It is therefore incumbent upon you to exercise prophylactic measures and thus prevent these serious diseases of mankind.

I have noticed hundreds of cases in our wards, that patients who seek charity at our hands give evidence of having spent considerable money on a type of work that is common to our dental parlors, and of unscrupulous dentists who are putting gold crowns and bridges in the mouths without regard to the damage that work produces. It should be considered a crime to put a gold crown or bridge on a tooth unless that tooth is properly prepared to receive it.

We need a few Billy Sundays to go through the country before the members of the dental profession, to teach not only the doctrine of prophylaxis, but extraction of teeth where they are likely to be a menace to the health of the patient."

Dr. H. S. Vaughan, N. Y. "Roots filled by careful men and supposedly all right in the light thrown by the x-ray have been shown to be a source of infection. These infections may be from the small blind abscess or the larger bone

necessity in the light of what is being proven. The work in the past has been the treatment of existing diseased areas, that of the future prevention."

Many times when you look into the mouth, you ask your patient how his teeth are. He says "perfectly comfortable" as he has just had them fixed



Small blind abscess at apex of crowned bicuspid with imperfect root-filling. The removal of this tooth with six others in the same month cleared the case of rheumatism, heart trouble and neuralgia.

and they should not trouble him, for most of the nerves are removed. You may exclude the mouth after hearing this in your diagnosis but as soon as he mentions devitalized teeth you may be on the right track. You may send him back to his dentist for an examination, but no such examination can be complete without the use of the x-ray, and the dentist must be conscientious enough to condemn his own work if it is found to be at fault.

In my own practice, three years ago, a case presented with the teeth badly worn off. These were restored to the original shape with gold inlays. From the excessive wear some of the nerves may have been diseased before the teeth were filled or they may have later died from the irritation of the fillings being too close to the nerve. Last winter he developed an attack of rheumatism and was confined to bed. One antrum was affected which was opened through the nasal cavity. His physician questioned him about his teeth but he said they were fine, never gave him any trouble since they were fixed. He was confined to bed three weeks after which the one knee remained stiff and he was able to get around with crutches for about two months. Being my patient, I persuaded him to have his teeth x-rayed. Large areas of absorption were seen in region of both antra and on extracting these teeth, found these areas to extend into the antra. A few weeks after the last ones were removed, he



Large cyst caused by devitalized tooth without root-filling.

abscess or have undergone cystic degeneration and perhaps involved a large number of teeth, then we have them breaking into the antral sinus, or the nasal cavity. These cases often require extensive surgery in order to affect a cure: and all this due to imperfect canal work.

Radiography is not a luxury, it is an absolute

was able to discard his crutches and go to work. In his case two teeth were extracted and curetted at each operation. Each time, for a few days following, his condition was worse, due to the germs getting into the circulation after breaking up the abscess walls.

It is a mistake to take out too many teeth at one time when a patient is suffering from infection. Cases are on record where this has been fatal.

Some years ago I removed a nerve from a tooth of my wife's. For several years she had been having headache in the back of her head, having it a good share of the time. She consulted eye specialists, and general practitioners without relief, always kept a supply of aspirin and phenacetine on hand. Was fitted with glasses but this did no good. In February a radiograph of this tooth was taken and it showed an area about the size of a pea that was absorbed. After opening and ionizing the tooth it has almost cleared the headache. She also had considerable pain in the region of the heart previous to treatment but which has now disappeared.

Crown and Bridge Work—The subject is claiming considerable attention at the present time. Leslie's Weekly has had some very good articles on this subject. Dr. Hunter of London started the criticisms when he condemned American dentistry, and we became quite indignant, but we must admit in the light of our present knowledge, that he was right to a great extent and a number have changed their methods, but far too many have not.

Most of the abutments for crown and bridge work are devitalized teeth. We know that nine out of ten devitalized teeth are not perfectly done. That makes nine out of ten subject to infection, then place an additional burden on these already weakened teeth, we have the reason that so many bridge teeth are a source of infection. The same thing holds true concerning crowns as root-canal operations. It is the exception to see a properly fitting crown. To make a properly fitting and sanitary crown requires considerable time. The nerve operation is generally thrown in without extra charge.

The dentist with an average degree of skill would consume on an average of three hours for a perfect root canal operation on a molar and two hours on the crown. Then if it cost him \$1.50 (about the average cost for each producing hour) he would make a profit of 50 cents net for five hours work. So you can see why crowns are not sanitary. I shall pass a few samples around that you may note the fit at the gum margin and you can see the favorable place for filth.

A crown can be made sanitary, but it requires

considerable more time than is ordinarily given the operation.

Impacted Teeth—The next source of infection are impacted teeth. Some may have part of the crown visible, the presence of others can only be determined by the use of the X-ray. They may cause neuralgia, insanity, ear disorders, and eye



Large cyst remaining after a tooth had been treated for a fistulous opening and not cured.

Showing perfect root-filling.

disorders or any diseases caused by other foci of infection.

The late Dr. Henry S. Upson of Cleveland, Ohio, has cured cases of melancholia, mania, and dementia precox, by locating and removing impacted teeth.

Since certain forms of insanity might be cured

by locating abnormal oral conditions, it would seem that there should be a competent dentist in each hospital. He should also be an expert roentgenologist.

Dr. Craig, M. D. of the neurological hospital of N. Y. says: "The continued swallowing of pus is undoubtedly the cause of disorders of digestion, and finally an anemic state almost cachectic. This depleted exhaustive state may be associated with a melancholic state. It seems a far cry from mouth infection to mental disease, but where one witnesses profound depression clear up following the drainage of several pus pockets, one is persuaded that the chronic intoxication, the result of absorption from the pent up infectious process, was an etiological factor."

Dr. E. A. Rogers of Iowa University and myself made an examination of patients in the insane hospital just as they happened to be brought



Blind abscess on mesial root of second molar and distal root of first molar causing systemic disturbance.

to us. Out of forty lady patients, one had teeth which could be pronounced healthy. The other thirty-nine had one or more defective teeth, some mouths fairly reeking in pus and so offensive that we had to hold our breaths to look into them. Might not some of these people be retained there on account of their teeth? Up to this summer, our insane hospital has had no dentist on the staff, but they now have one and I believe he will do much to better the condition of the patients.

Dr. Upson cites a case of hypomania where a lady had screaming spells, was nervous and sleepless, but whose condition was cleared up by removing an impacted tooth and an abscessed tooth.

A physician twenty-eight years old became maniacal, talked foolishly but insisted nothing was the matter. Was cured by removing an impacted cuspid. He also cites a case of St. Vitus dance cleared up by removing impacted teeth.

Quoting from his book on insomnia and nerve strain: "Of the viscera responsible for the more obscure cases of nervous and mental derangement, I have no hesitation in designating the teeth as the most important." There seems to exist among physicians not only a disregard, but a distinct, though mild dislike of the teeth as organs to be reckoned with medically. Ordinary pain at a distance, as headache or neuralgia, due to the teeth, though well known, is commonly disregarded." According to Dr. Upson's table including two and one-half year's observation out of forty-two cases operated on for dental disorders, where the patients were insane and dental foci were suspected, fourteen made a recovery and twelve improved. The different maladies were manic depressive type, dementia precox, psychosis, insomnia, neurasthenia."

Pyorrhea is another source of infection and if recognized early, usually is curable, but if progressed to the stage that the teeth are loose, little can be done for it, as the bony wall surrounding the teeth is gone and not a sufficient amount of new bone will regenerate to hold the teeth firmly in their sockets.

The treatment of the early stages of pyorrhea is not difficult and the disease is easily cured unless complicated with some systemic disease, as syphilis, etc., but as we ordinarily see it, it is easily cured. Dentists do not seem to pay much attention to it until the teeth start to loosen, and then they have little success with it. In the later stages it requires a high degree of skill to remove all deposits and unless this is done, there is no hopes for a cessation of the disease. Many beautiful sets of teeth are lost, which if taken in time would have been as easy to save as the ordinary teeth are saved by filling. The one great trouble is that the dental student expects to get all of these methods of treatment at college, and he should. He is taught the treatment of pyorrhea, it is true, but the treatment is not sufficiently thorough, neither do they have instruments properly shaped to reach all of the surfaces of the roots and this is essential for a cure. A set of instruments has been invented with which all surfaces of the teeth can be reached but they can only be obtained by taking a special course, and I believe every dentist should have this course. Some men get enthusiastic over the use of some remedy in the treatment of pyorrhea, claiming great results for the medicine but state incidentally that all deposits be removed and the surfaces of the teeth made smooth, that after making six injections all signs of pus disappear. By removing all deposits and making the surface of the tooth smooth, the flow of pus will cease with

one treatment unless complicated with some systemic disease. I do not believe many realize what a filthy disease pyorrhea is. In a bad case, it would not be unusual to have a pocket under the gum of each tooth a quarter of an inch in depth. Suppose they have twenty-eight teeth. Then we have a pocket the total length of which is seven inches. This is filled with pus and in addition food is pressed into it to decompose. Then after a time, some of these nerves may die, due to the movement of the teeth or to the pus infecting them, and we also have some blind abscesses develop. If we get a drop of pus from each pocket every twenty-four hours, which I think we will, that would be approximately one-half drachm of pus to be swallowed and that from the blind abscess to be discharged into the blood stream. Nature is very kind to tolerate this condition, but she often rebels. As in root-canal operations, there are not enough dentists doing this work that it may be of any help to you in focal infections. When the time comes when dentists will specialize and do their operations in the most thorough manner, then they will be of considerable help to the medical profession in eliminating disease.

Since we are finding that the teeth are often found to be a source of infection, there are among the professions, men who will go to the extreme and advise the extraction of many healthy teeth. This is being done at the present time, but after a careful examination including x-ray, the teeth are found to be healthy, we have no right to advise extraction.

At this time it may not be out of place to cite a number of cases.

Dr. R. T. Woodyatt has called attention to the frequency with which exophthalmic goitre is associated with infected mouths. He has also collected a number of cases of glycosuria in which infections of the mouth were present and the glycosuria disappeared after the infected teeth or tonsils were removed.

As an example I will cite the following case from my practice. Condition of patient reported by Dr. F. F. Agnew.

Patient, age twenty-four years, first seen December, 1915; patient had had trouble for six months; loss of weight, nervousness, insomnia, body tremors and weakness. Examination—Thyroid gland moderately enlarged and firm. Tremor of fine character and general. Pulse rate 120-140. Exophthalmus pronounced, von Graefe and Stellwag signs positive. Examination of the mouth revealed four blind abscesses and one impacted third molar. Improvement was early noticed after mouth condition was cared for, and now the patient is in every respect normal, even

to size of thyroid without medical or surgical treatment.

Dr. Martin Fischer, professor of physiology in the University of Cincinnati, relates a number of cases among which is a surgeon who had suffered three years with rheumatism of the right arm. He had six lower teeth affected with pyorrhea. After having these six extracted, in two weeks the rheumatism had left.

If you will permit I shall cite more cases from my practice, for they will show the benefits to be derived by removing foci of infection about the teeth. These cases did not receive medical treatment.

Case of a lady who had her trunk packed to Colfax for rheumatism of shoulder. Came in to have an abscessed tooth removed before she left. The rheumatism began to leave and in ten days was gone without going to Colfax.

Case of swelling of knees existing for ten years. Was sent to me to see condition of teeth badly affected with pyorrhea. At this time she was suffering from severe tonsillitis which her physician thought might be caused from the bad condition of teeth. She also had some heart trouble. Extracted worst pyorrhea teeth and treated balance. Tonsillitis, swelling of knees, and heart trouble left. It has been two years since this was done and there has been no recurrence of her former symptoms.

Case of headache of several years standing cleared up by locating a partially dead nerve. Case sent with following description. High blood pressure, 200 M. M. systolic. Markedly accentuated second aortic, intestinal disorders of a low grade toxic sort. Also complains of so-called rheumatic pains. An examination revealed rarefied areas over seven teeth, one penetrating the antrum. These were extracted and curetted in March, 1916. A letter written by the patient August 1, 1916, states that she has been relieved of rheumatism, severe heart trouble and almost constant neuralgia in head and neck. Also stomach trouble is much relieved.

Case of physician who had an infected antrum. A Denker operation was decided upon. A diseased molar was located under the affected antrum, after the removal of which the antrum cleared up.

In all cases of antrum infection, it should be determined if diseased teeth are causing the infection.

One case had had two antrum operations without benefit, but which was later benefited by removing a diseased tooth.

Of nineteen cases of rheumatism of which I have a record, where foci of infection were removed from the mouth, eighteen were improved; one reports no improvement.

Stomach trouble, of two cases, both were improved.

Arthritis, of five cases, three report improvement, and two no improvement.

Heart trouble, three cases, all three improved.
Goitre, one case improved.
Iritis, one case improved.
Ear trouble, one case improved.
Headache, three cases improved.
Antrum, three cases improved.
Most of these cases report marked improvement.

Up to the present time, we have not been diagnosing all pathological conditions in the mouth, but have concerned ourselves too much with the repair of teeth.

BRONCHIAL ASTHMA*

TAYLOR R. JACKSON, M.D., Albia

In presenting this paper for your consideration, I do so, knowing full well that I cannot add anything to what you have already read or worked out for yourselves, concerning this old, but ever present condition, bronchial asthma.

I am constrained to do so because during the last rather strenuous winter I have had to deal with an unusual number of cases of this disorder, and have been put to the end of my resources so often in order to give relief that the subject has assumed an important aspect to me.

At any rate, any disease or condition that so often calls out the physician, in the witching period, from ten P. M., to two A. M.—the favorite time for the asthmatic wheeze—cannot rightly be considered of no importance.

Bronchial asthma has been considered and defined, by most authorities, as a neurosis characterized by dyspnea occurring in paroxysms. The patient awakens at night with a sense of suffocation; he gasps for breath; cyanosis, marked in degree, develops and profuse perspiration occurs.

Supporting himself, as best he may, he endeavors to breath, expirations being unduly prolonged—he appears very ill, indeed, no other condition being so alarming and the patient yet so safe, except in cases of spasmodic croup in children.

In other instances there are some prodromal symptoms, such as malaise, drowsiness, or polyurea, which precede the attack. In the worst cases, however, in spite of the dyspnea, respirations are not increased in frequency, even though the most extreme condition of cyanosis exists and the patient is in marked need of oxygen.

Diagnosis—This rests on the chest findings—that is, low sibilant rales throughout both lungs. The expirations are unduly prolonged and difficult, and the respirations normal, or nearly so,

in frequency. Cases of dyspnea, due to heart weakness, will be disclosed on auscultation. Dyspnea, due to renal disease, usually is accompanied by some edema or evidences of renal insufficiency, or lacking these, the examination of the urine will be sufficient for differentiation. Laryngeal stridor, or membranous croup, are conditions that may occasionally cause confusion, but in these conditions the inspiration is difficult and abnormal chest sounds are absent. In doubtful cases, the diagnosis may be made by the finding in the sputum of the spirals of Curshman.

Pathology—Here, as in all things pertaining to this disorder, there is a difference of opinion. The older writers hold that there was a true contraction of the muscular walls of the bronchioles; that these were directly under the control of the pneumogastric, recurrent laryngeal, or sympathetic nerves. Any irritation of these would result in a contraction of the bronchioles, with consequent narrowing of the lumen and difficult breathing. Others hold that the trouble is truly secretory; that a mucoid substance is secreted, which produces an edema of the bronchioles and consequent blocking up of air spaces. The true pathology, in my opinion, is a combination of all these conditions. Beginning at first with the normal bronchioles, we have repeated attacks producing a more or less permanent bronchiolitis, which results in a permanent condition of low resistance where attacks are precipitated by stimuli much less potent than formerly needed in the earlier stages of the disorder. The effort of the bronchioles to expel the air, results in more or less dilatation, until in the asthmatic of long standing, we have a true emphysema produced, where the patient's breathing never returns to normal.

Etiology—We have to deal here with about everything that pertains to the life of man. From rhinologist to proctologist, opinions as to the exciting factor in this "disease of theories," as Osler calls it, are practically unlimited. Adenoids, nasal polypi, chronic ethmoiditis, buried tonsils, retroverted uteri, splachnoptosis, cold feet—not the political kind—have all had to bear the blame. In going over the various articles, dealing with the etiology, one is impressed by the convincing character of the arguments as to the dominant factor in the production of attacks.

Davies, of California, in an analysis of some three hundred cases, comes to the conclusion that errors in diet, or malposition with consequent derangement of function of the organs of digestion, are the most common excitants. He discounts heredity as a factor, and minimizes the effect of

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climate as exciting causes. In this connection, I believe that in dry climates, where we have a dust laden atmosphere, there will be many cases of asthma; also among those workers whose occupation causes them to breathe dust while working in close or poorly ventilated places. As instances of this nature I may cite those cases of miners' asthma (so-called) with which those who are located in the mining regions of our state, are, no doubt, familiar.

The last six years have marked quite a change in the study of the etiology. This has been coincident with studies in anaphylaxis or protein sensitization.

The experiments of Auer & Lewis, in 1909, proved that dyspneic attacks could be produced in animals by intravenous injections of horse serum, even after the vagus nerve had been severed and medulla and cord destroyed. These attacks had all the appearance of attacks of bronchial asthma, and the observers concluded that the irritation was peripheral and not central. Reasoning from this sensitization by horse serum, the phenomenon of the effect on certain individuals of asthmatic tendencies, when exposed to emanations of the horse, were noted. It seems probable then that asthma might also be due to protein intoxication. Babcock has accepted this theory as a working basis and has treated his cases on this foundation. He claims that growths in the nose obstruct drainage and further absorption of protein from a chronic ethmoiditis previously existing. Their removal facilitates drainage, thus preventing absorption, thereby relieving the attack.

In those cases in which pelvic operations relieve the asthma, the reason is the same, namely; freeing the system from foci containing toxic protein. The same is true of alveolar abscesses, diseased tonsils, and bi-products of digestion where metabolism is incomplete. In all these there is an absorption of protein. This sensitization is capable of being passed from parent to child, and explains the hereditary nature of the disease.

From this study of the various theories, I am led to believe that;

First, Heredity does play an important part in the etiology of asthma.

Second, That no one theory has yet been devised that will explain all the phases of the disease.

Third, All theories fail that do not take into consideration the fact that there must be an underlying neurosis, a hypersensitive nervous system.

Treatment—This will consist first in provid-

ing, if possible, hygienic surroundings—fresh air, plenty of exercise, careful attention to diet, particularly with reference to the carbohydrate intake. All obstructions to nasal passages, diseased teeth and tonsils, should receive proper attention. Where the offending bacteria can be located, autogenous vaccines will be indicated, and in many cases will give marked relief. As to the individual attacks, in my experience nothing can be so certainly relied upon as a hypodermic of morphine and atropine. The latter drug is lauded by many and should be given preference because there is no danger of an abnormal drug habit being formed.

There will be a certain number of cases that will not receive benefit, even after the most searching inquiry as to cause. These will be benefited by a change in climate, which means, change in environment. Of drugs to prevent attacks, I have had better success with iodide of potassium than with any other. One case I have had under observation for five years. She had tried change of climate and other methods for years, with no success. I was called first to care for her during an attack of pneumonia. After her convalescence was established, I prescribed ten grain doses of iodide of potassium three times daily, finally reducing the dose to five grains. This has sufficed to keep her reasonably well. What effect the attack of pneumonia had in cleansing up the condition, I am not able to say.

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Discussion

Dr. H. C. Eschbach, Albia—I was very glad indeed to hear the practical paper of Dr. Jackson on an all-the-year-round interesting topic. A considerable fund of information has been gathered intending to explain the cause and phenomena of asthma. But scarcely ever have two individuals agreed in all points as to the causes and the phenomena. I think probably all agree, though, as to this: That asthma consists first in expiratory dyspnoea, in the bronchitis and the cough, the more or less characteristic expiration, in a certain emphysema either temporary or permanent, and, above all, in the neurotic condition of the patient. As suggested by the essayist, the bronchial irritation which seems to produce the asthma, or seems to precede it rather, may have its origin in a number of local lesions—the nose, the throat, the larynx, the lung, the adenoids, the alveolar tissues. It is useless to go over the entire number, but a certain percentage of cases also develop their bronchial irritation from hay fever or other anaphylactic causes. Normally the expiratory effort is unconscious and should be so, but with the asthmatic wheezer it becomes a painful, conscious act, and the longer the attack the

more painfully conscious he is of it and the more labored. Now, this in a way sets up a vicious sort of circle, increasing the edema and swollen condition of the bronchial mucosa. The labored effort increases this circulatory condition and increases the swelling. The swelling in a way increases the tendency to infection, and the infection increases the swelling, and you have a vicious circle there established at once. Now, it has been observed that if the asthmatic can exhale slowly and deliberately, his exhalations will gradually grow easier and the attack will be shortened. On the other hand, it has been observed by Von Schurnberg, I think, in his experiments made in 1906, when he took a class of students and had them imitate the asthmatic breathing, that a prolonged interval of imitations of the asthmatic wheeze actually produced the involuntary, labored expiratory effort, and if there was added irritation, as a cold, in connection with that, these students very easily acquired a severe asthmatic attack. In fact, one student acquired it so positively that it took a year to cure him of his asthmatic attacks with the best efforts he could make and the most efficient treatment that could be given. This experiment shows how much the history and temperament of the individual may have to do with the condition of the confirmed asthmatic. The asthmatic dyspnoea, then, seems to be a mechanical disarrangement of the circulation of the lungs and the bronchial mucosa, but this condition is induced by the conscious or forced expiration, which in turn has been induced usually by a bronchial irritation, generally of some focal origin, and in my own observation, outside of the conditions spoken of by the essayist, as the focal origin, such as the teeth, throat, etc., which prompt an attack. I have found many asthmatics, in acute dyspnoea, as the result of acute indigestion, also acute attacks brought on by excitement, apprehension or other types of nervous explosions.

THE POST-OPERATIVE MANAGEMENT OF SURGICAL CASES*

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In choosing this subject I was led to do so because of the fact that a very important part of the surgical treatment of cases lies in the after-treatment, and I believe that this importance is likely not to be fully realized; and again, because if we use well adapted methods in the after-care I believe that we will not only save our patients a great deal of discomfort and prolonged convalescence at times, but not infrequently save their lives. Because the post-operative management of cases has not as yet been standardized, there are too many different methods in use. We are more likely to pay attention to tradition than to reason in our post-operative treatment.

Cathartics—Probably the most frequent mistake that is made in surgical cases is the over-use of cathartics. In the first place it is said the patient should be well cleaned out before a surgical operation. However, I believe that often this is not necessary. Of course, if the patient is not having enough evacuation of the bowels he should have a cathartic before operation, but not a severe one—certainly not a purge. On the other hand if the patient is unaccustomed to the use of cathartics and his bowels move every day satisfactorily, I believe it is a mistake to give such a patient as that, one whose bowels move naturally, a cathartic before operation, for it is doubtless true that in a great many cases this accounts for much of the discomfort following operation in the way of tympanites, gas pains and vomiting. Patients should not be unnecessarily disturbed by cathartics just at the time they have to undergo an operation, especially laparotomy.

After operation, and even before the operation is done, it is quite commonly the custom to have a routine order like this: So many hours after operation, a cathartic is to be given. Very often the administration of a cathartic does harm instead of good. I am not at all concerned at allowing a patient's bowels not to move for three or four days afterwards, and then if desirable to have them move by the use of not a cathartic, but rather an enema. We know that tympanites and gas pains depend to a great extent on the type of operation, on the length of operation, on the condition of the stomach and intestines, and on the amount of handling of the stomach and intestines during the operation. Other things being equal, the less we handle these organs, the less we expose them to the air, the less length of time that is consumed in the operation, the less tympanites and gas pains you will have. But I also believe you will have much less tympanites and gas pains if the patient has not previously been purged and if you do not start catharsis too soon afterwards.

I distinguish between tympanites and gas pains, at least what is usually called gas pains. Patients who have tympanites after operation do have gas pains, but also patients have pains which are called gas pains, but which are not. They are simply pains produced by irritation of the intestines and excess of peristalsis, sometimes reverse peristalsis, set up by what was done at the operation. The term which the English have given this condition is peritonismus, an irritation of the peritoneum. We must have some of that irritation after every laparotomy, but with care we can to a great extent avoid it.

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Now, if we consider that these pains are all gas pains, and that therefore for the relief of the pains we must get rid of gas, to get rid of that gas we are often giving something which only increases the peristalsis, whereas the pains are already due to an irritation and to increased peristalsis and what we want is rest. Mind you, I do not mean that if we have real tympanites and gas pains; in that case I believe the gas should be gotten rid of by enemas and not by catharsis. In those cases, rest for the intestines is what is needed more than anything else, and not a cathartic or even an enema.

Vomiting—I haven't anything very definite to offer as to the cause of vomiting or even the treatment of vomiting. It comes on after operation so many times, and it may depend upon so many conditions, that the indications must be met in each individual case. But it must not be treated as vomiting, but only treated after we try to eliminate as far as possible all the causes that might produce vomiting except the ether vomiting. If a toxic vomiting, it is very important for us to know that. If it is a vomiting due to dilated stomach or to peritonitis, it is very important for us to know that. Only after excluding these other causes may we treat it as vomiting, perhaps brought about by ether; that is, irritation of the stomach due to excretion into the stomach of ether. I do not know of any specific treatment for this. I have seen a number of things tried, and many men have great faith in their certain method. But I believe the simplest thing in that case is best once we realize the cause of the vomiting. If ether, rest of the stomach; if it becomes severe, gastric lavage.

Catheterization—A serious mistake that is made, not perhaps so very frequently, but at least occasionally, is in not trying sufficiently to avoid catheterizing the patient after operation. You all know of the orders that are so frequently given, either before the operation or immediately after: If this patient does not void in so many hours, catheterize. I believe that is a serious mistake. This, as a rule, if done under strict aseptic precautions, will not produce harm. But, no matter what precautions are used, no matter who does the catheterizing or how it is done, occasionally a cystitis will result; not very often, but when it does occur it is likely to produce serious conditions, not only at the time, but practically make a life-long invalid of the patient. And even if this occurs only very infrequently, we should try to avoid it and we can avoid it, by making use of one or more of several simple procedures with which you are all familiar.

Normal Salt Solution—The method of giving normal salt per rectum is now becoming generally adopted, but I think more slowly, than it should. Those who have begun to use it will without doubt do so more and more frequently, and if there is any question about the case. Is the patient a little weaker? Is this patient likely to develop some shock as result of the operation? Is there a possibility of acidosis developing in the next few days? Will he vomit? In my opinion the time to use normal salt is immediately after operation. In other words, it should be used early, and it should be administered by the continuous drip method. I know that those who have used it are from year to year, employing it more and more frequently, until now it is in many places a routine.

Convalescence—When shall we allow the patient up out of bed? I think that this question applies especially to the laparotomy cases. Very often patients are allowed up from bed very early—the third, fourth or fifth day—by men of great experience; men who do an enormous amount of work, and who would not allow their patients up if they thought it would do any harm. The only object I can see in letting them get up thus early is that this gives the patient satisfaction, and he says, I was in bed only three or four days, while somebody else's patient was in bed twelve days or two weeks. Nevertheless I think we have good reasons to not be influenced by the patient or what he may say, because we know both by experiments and by personal observation of wounds after operation that ten days at least are necessary for the organic union of a wound. We also know that the most important element in the uniting of a wound is rest. If during that ten days while the wound is in the process of uniting we allow the patient to walk around or even be up, this does away with the most important thing in the union of the wound, and that is rest. In the next place it puts a strain on our suture material, and in case of separation this avoidable strain upon the suture material may cause failure. Therefore, for the reasons cited I think we should still persist in saying that it is logical to keep our patient at rest until we have organic union.

Acute Dilatation of the Stomach—The next condition which comes up for consideration, acute dilatation of the stomach, is fortunately comparatively rare. While this is a very infrequent complication, nevertheless I believe it is not recognized more than once in five or ten cases where it develops. While the condition is infrequent, we should always bear it in mind and rule it out before we treat the patient for other

conditions such as paralytic ileus or peritonitis. While, as stated, acute dilatation of the stomach is relatively infrequent, it is much more frequent than that form of paralytic ileus which resembles it and which may kill the patient in thirty-six hours. When the diagnosis of paralytic ileus is made, I believe that nine times out of ten it is either a very acute septic peritonitis or an acute dilatation of the stomach. In the one case we are helpless, but in the other case all we need to know is the diagnosis and how to treat the condition in order to save the majority of these cases. In a case that we suspect of having an acute paralytic ileus or acute septic peritonitis, we should first rule out acute dilatation of the stomach by passing the stomach tube, by determining the size of the stomach, by gastric lavage and by the posture of the patient, because if acute dilatation of the stomach exists, treatment is so quick and satisfactory that this alone will make the diagnosis as a rule.

Acidosis—Acidosis is, I believe, a condition which develops post-operatively much more frequently than we have realized. At least, since I have been on the watch for this complication I see it much more frequently than formerly I had any idea it existed. And in looking back over cases that were hard to explain at the time, that died without our realizing why they should die, I am now convinced that once in a while at least we had to deal with an acidosis. Here is another post-operative complication where, although a certain number of the cases will die in spite of treatment after we recognize the condition, nevertheless we can say that we recognized it, and took measures to combat it.

In exophthalmic goiter where acute hyperthyroidism develops either during or following operation, resulting fatally, it is doubtless true that in a large number of cases death is caused by acidosis.

I believe that in some cases vomiting may be continued and prolonged until this excess of vomiting over a long period of time in conjunction with the slight amount of fluid taken into the body, may produce an acidosis which in turn will cause vomiting to continue until death occurs.

In patients who are in a low condition from any cause, we will find acidosis much more frequently than was in the past appreciated. Some cases will not be so plainly evident and we must go after them for the diagnosis. Treatment of acidosis should start early. At the first suspicion of acidosis, or even where you have a condition which you realize may produce acidosis, I believe the treatment, if the underlying condition

be not speedily relieved, should start before acidosis begins. Treatment started sufficiently early is almost certain to prevent it, unless there is serious diabetes or exophthalmic goiter which is not under control. Treatment should be normal salt solution per rectum continuously, and glucose and bicarbonate of soda and whiskey given with it.

Relief of Pain—As to the relief of pain, I believe that heroin is in the ordinary case the best thing we have, because it has less bad effect on the patient.

Shock—I would mention only to say that no one knows what shock is. But we know that we can do a great deal towards its treatment in the way of normal salt solution, keeping the patient at rest, and the use of heroin, or, if this does not relieve pain and the conditions are present which produce shock, then morphin, which is after all the biggest thing in the treatment of shock.

Discussion

Dr. D. N. Loose, Maquoketa—My surgical experience is quite limited. The paper is appreciated by all of us nevertheless. The point of posture of the patient in retention of urine is important. Many patients can not empty the bladder lying prone in bed. It is much safer to let them sit up than to catheterize. To most of us I believe acidosis is as difficult of diagnosis as acute dilatation of the stomach, therefore it seems to me we should use a routine method of treatment for the purpose of preventing acidosis. I have had most gratifying results from gastric lavage in post-operative cases. Some surgeons make a routine practice of lavage before patient leaves operating table. I believe this is good treatment.

Dr. Murdoch Bannister, Ottumwa—I would ask Dr. Rowan what his idea is as to the value of pituitin in post-operative cases of gas pain.

Dr. J. N. Warren, Sioux City—As to the morbidity formerly connected with surgical procedures, this can be largely avoided, except possibly that of sepsis, when the proper history has been taken and a complete examination of the physical condition made, the not too hasty placing of the patient upon the table and then the proper technic of operation and after-care followed out in each case. There is no reason why we should not at least appreciate the condition of acidosis before the patient is operated; it is not necessary to wait until afterwards. While he may under certain conditions develop acidosis following a surgical procedure, yet you will have the ear-marks, the sign-board, present before that patient is put upon the table. And if proper technic is observed, undue handling of tissue avoided, and all possible gentleness exercised, much of the morbidity following operation will be largely done away with.

Dr. A. G. Hejinian, Anamosa—I agree with Dr. Rowan in all that he has stated. He has so ably pre-

sented his subject that it looks to me as though but very little could be added to it. As Dr. Rowan has said, it is better to use but a moderate amount of catharsis in those cases which do not require an operation on the intestines. But if the condition is one requiring, for example, a gastro-entrostomy, it is advisable to have the bowels empty in the beginning. But in ordinary cases I also do as Dr. Rowan advises, telling the nurses not to give strong cathartic to weaken the patient. Relative to using catheterization, I do not believe in letting a patient go longer than twelve hours. My order is to catheterize if the patient does not urinate after twelve hours from the time he leaves the operating table. The after-treatment of surgical cases has been neglected, or perhaps we might rather say that our technic in treatment after operations has not advanced as much as the operative part of surgery because the most of our best surgeons have not adequate time to look after their surgical cases and make a careful study of the after-treatment. I am sorry to say that in the larger clinics there exists a greater mortality in surgical cases on account of the lack of proper after-treatment, as compared with the small and well equipped hospitals under the charge of competent surgeons. Naturally a surgeon who has but one or two operations a day and is able to look after his patients himself, without leaving everything to internes, will be more successful with his cases than the surgeon of a large clinic who does five to ten operations a day. It would seem to me to be a physical impossibility to operate five to ten cases a day and then look after them carefully afterwards. The surgeon is responsible to the patient not only for the operation, but for the after-treatment also. Our internes are not competent, they are there simply to learn. The surgeon himself should personally look after the welfare of the patient while he is in the hospital and we are under moral obligation to do so. Another point I wish to mention is this: I do not believe our surgeons should do major operations in the homes of the patients and leave them under the family physician's care. Our physicians are competent as physicians, as internists, but are not able to take care of surgical cases. It is certain that if the surgeon operates he should be responsible for that case. On that account I condemn the idea, and I have lost some patients and friends among the physicians because I have refused to operate in their homes on those cases that were able to go to the hospital. It is true, as Dr. Rowan has said, that after-treatment is very important for the recovery of surgical cases.

Dr. J. L. Augustine, Ladora—One great surgeon has said that when you have closed the abdomen you have practically sealed the fate of the patient. While I believe that is not absolutely true in every instance, it is true so frequently that it is recognized as the rule. I would not agree that it would be a mistake to do a major operation in the private room. Often if the patient could be removed to a hospital it

would be better. But I have been guilty of operating outside of a hospital, and I feel sure that it is perfectly possible to operate successfully on a patient in a private home, I don't care what kind of a home it is, if the surgeon has the industry to make the proper preparation. So far as after-treatment is concerned, it must necessarily fall into the hands of the attending physician. If the surgeon has done a clean operation, if he has not prolonged the procedure, if he has not needlessly handled the tissues or lost blood, that patient is not going to require very much after-treatment. That has been almost my universal experience. If tympanites develops, either you have infection, you have handled the tissues unnecessarily, there has been too much preparatory treatment, or you have done something that ought to have been avoided. I heartily subscribe to everything Dr. Rowan has said. I feel sure that the preparatory treatment of our patients frequently is too violently carried out. For instance, in acute emergency cases catharsis and elaborate preparation are impossible, but as a rule such patients do just as well and sometimes better than those patients who undergo preparation over a period of several days. Then I would add something to the preparatory treatment as outlined; and that is, give the patients, if there is time, abundance of water to drink, I think it helps immensely in the after-treatment. The patient will not be so thirsty and there is less liability to shock. As to vomiting, I feel certain that in a good many instances this comes from irritation of the vomiting center by ether. If that is true, there is no after-treatment for this condition that is worth very much. Washing out the stomach may have some little influence by removing the ether-laden mucus, but the vomiting that is produced by irritation of the vomiting center can be relieved only by elimination through the eliminative channels. Of course, where irritation is caused by drainage tubes, handling of the intestines, infection, and things of that sort, it is altogether a different matter, but many things are done for the relief of vomiting that are useless. Possibly water given freely is all that is necessary. I frequently give my patients water almost as soon as they wake up. If it comes up it doesn't hurt anything, and by washing out the stomach may be beneficial. If it is retained it relieves thirst and I feel certain we get good out of that. I am glad Dr. Rowan touched on the use of the catheter, for at many hospitals nurses are regularly instructed, "If the patient does not urinate in six or eight hours, catheterize." I have a patient who, three months after operation, has an irritation in the bladder that was produced by a catheter. If the bladder is normal it may not make any difference, but occasionally you will get infection from frequent use of catheter which is a most uncomfortable situation, not only for the patient, but for the surgeon. Usually a catheter should not be used unless the bladder is well filled and the patient unable to void. In regard to morphin, we do not perhaps use as much morphin as we should. In my

early experience I used very little morphin—I was afraid of it. I do not like to use it now after twenty-four hours, but during the first twenty-four hours the patient should be made comfortable although three or four injections of $\frac{1}{4}$ grain may be necessary to do it.

Dr. L. W. Littig, Davenport—Dr. Rowan's paper contains many truths which are both fundamental and immensely important. First, in regard to catheterization: Some years ago I attended a great clinic and the surgeon in charge made this statement: "Don't catheterize your patients; lock the catheter in the safe and forget the combination." Shortly after, in another clinic I heard the same advice. These statements made an impression upon me. Upon my return home I passed this impression on to the nurses, with the following result: One young woman, a foreigner, not familiar with any of our languages, suffered very much after confinement. When she finally received attention she had ninety-five ounces of urine in her bladder. Another woman, operated for procidentia: the uterus was fixed in the abdominal wall according to the Murphy-Crile method, plus an anterior and a posterior colporrhaphy. She was under the care of a competent nurse, but the catheter had been locked in the safe. After several days, her bladder contained seventy-five ounces of urine. Now, if after a reasonable length of time the patient does not void urine, the nurses are instructed to use a catheter. Some of this teaching too emphatically set forth is dangerous. In regard to after treatment: Give a patient plenty of water, not a teaspoonful but a generous drink, and let him vomit if he will; give him a second glassful, which he may vomit, but he will not vomit the third. There is nothing so irritating as to give a patient a teaspoonful of water at a time, or a little cracked ice, or to moisten his lips. Let him have water by the mouth as soon as he wishes, except in rare instances, and as a matter of routine, the Murphy drip after operations until water is taken freely by the mouth.

Dr. J. S. Dean, Wheatland—As to catheterizing after operation, I invariably catheterize every eight hours. I feel that the danger from over-distention is greater than from catheterizing in skilled hands. I employ only competent nurses, and have seen no ill effects following catheterizing. So far as vomiting is concerned, I rarely see it; due, I believe, to three reasons: 1. Free drinking of water up to time of taking anesthetic. 2. Only skilled anesthetists permitted to give anesthetic. 3. Sponge packs not used except as an absolute necessity.

Dr. M. F. Moore, Martinsburg—So far in this discussion, I have not heard anything about feeding patients after operation. This is one of the very important features in the after-treatment of these cases and I believe that early feeding of the patient is one of the most potent factors in the production of acute dilatation of the stomach and other distress that comes to a patient. In regard to acute dilatation of the stomach, while according to the literature it is of

rare occurrence, yet if we will make a close analysis of all our surgical cases that complain of distress and tenderness in the stomach following operation, especially if accompanied by a fast heart action, weakness and prostration, and pass a stomach tube in these cases, we will often find a considerable amount of gas and a darkish-green fluid. While I have not as large surgical experience as many, yet on several occasions I have obtained prompt relief by passing the stomach tube when these symptoms were present. The character of the drainage tubes that are employed following operation, is, I believe, frequently the source of very serious complications. For instance, if a tube of solid consistency be used and allowed to come in contact with the viscera for a considerable length of time, you may have vomiting or perforation of a viscus from pressure necrosis. Also long use of drainage tubes is, as a rule not necessary, if recent studies regarding peritoneal drainage are correct. Then again, in the preparation of patients we should, I believe, utilize Crile's theory of assisting nature to correct the conditions which are likely to lead to acidosis. In those cases in which it is possible, if previous to and immediately following operation, sodium bicarbonate is administered, we will do an immense amount towards preventing acidosis, which, when it does occur, is so fatal.

C. F. Wahrer, Fort Madison—

"If half the things that fill this world with terror,
If half the wealth bestowed on camps and courts,
Were given to redeem the human mind from error,
There were no need of arsenals nor forts."

And this presentation by Dr. Rowan will, I believe, contribute very largely to relieving the human mind from that error which leads us to do too much before operation and not enough afterwards. In one of our modern battles, conducted with the things that fill the human mind with terror, twenty thousand men fall into "the sleep that knows no waking," and forty thousand more lie on the battle-field with wounds from the simplest to the gravest in all portions of the body, and it staggers the mind and imagination, the terror that we witness there. How many of the men that suffer these wounds are given a bath, two or three enemas, an ounce to thirty-two ounces of castor oil so they will have fifteen motions before they die and thirty afterwards—how many, I say, are subjected to these preliminary procedures before the necessary operation is made? This is also the case in private surgery, where a patient is rushed to the hospital with an acute attack of appendicitis, obstruction of the bowels, strangulated hernia, ileus, and many other things. Under those circumstances you haven't time to do these things that are still used by many today! You rush these emergency cases to the operating room, and scarcely get through with the personal antisepsis when you take a knife and go at it. If the patients I have described can stand these things and come out all right, under most unfavorable conditions, how much better will the patient with whom you have plenty of time also stand the ordeal. I remember very well a big surgeon who had the name of

being one of the best with the knife, who could do as brilliant an operation as any one I have ever seen, yet though he would be as quick as any, fully fifty per cent. of his people died! Why? Because he did not give the after-treatment referred to here today. When through with the knife he was done, he did not care whether that patient received proper after-treatment or not. I do not believe a twentieth century surgeon is to be rated with the common lower animals, and yet sometimes nature furnishes examples of value. When one of the lower animals is wounded it draws off to a quiet, dark place, and awaits results. So with our patients, after operation is done, we should take them into a quiet, cool, pleasant room and keep all the gossips out, also prevent the nurses and sometimes surgeons who talk about their cases afterwards, from commenting upon the case within hearing. I repeat, if these cases were treated somewhat like the lower animals treat themselves, you would not do anything more than is necessary. You must not forget to give the needed attention, but do not take off the dressings merely to see whether the case is doing all right, like the child who pulls up his plants to see whether or not they are growing. I want to emphasize everything Dr. Rowan has said, and I hope it will become crystallized as firmly as the eternal crystallization of nature. I want that kind of truth to remain with us.

Dr. Chas. B. Taylor, What Cheer—This subject has been wonderfully well presented by Dr. Rowan. Still there are two or three points, which it seems to me should be emphasized by those of us who frequently see the results of bad after-treatment. Dr. Hejinian spoke the truth in his two great qualifications: That the surgeon who operates in the large clinics is oft-times too busy to see his patients after operation and depends more than he should upon the usually egotistic and untrained interne. The patient is in a large measure dependent upon the after-cure as given by an interne who is not trained, but who is only in training and only developing, and bad results and the mortality rate are increased by that very thing. When the operation has been done by an expert, as it is, if that same expert was as careful of his patients in the after-care as in the first instance, his mortality rate would be reduced very materially. We all understand that. But that is not so necessary as the other point referred to by Dr. Hejinian, namely: Turning that case over, as we do in a large number of instances in the State of Iowa, where our hospitals are not large, to untrained men—good physicians, but not experts in the matter of surgery. I do not believe that the average man who is not doing surgery

knows how to give the best after-treatment for surgery patients. In my opinion, acute dilatation of the stomach, the necessity of catheterization after operation, acidosis, and the septic conditions that get hold of the patient before they are recognized, could in a large measure be avoided if the proper after-care were instituted, and I think the surgeon who operates the case ought to keep posted in regard to the patient, in order that he may secure the best results.

Dr. Rowan—Answering Dr. Bannister's question in regard to the use of pituitrin for the relief of gas pains and peritonitis, I would say that I consider this agent too powerful in its action to use in the ordinary case. In some cases it will cause sufficient disturbance of circulation to prolong the condition, but in those cases where we have a very great distention of the abdomen which we have been unable to relieve by milder means, then I believe the pituitrin should be used and will often succeed. What Dr. Warren has said as to those cases in which acidosis should be thought of before operation as a possible result of operation, and therefore avoiding it, will, of course, apply to some cases. Nevertheless there are many cases where we realize beforehand that that particular case, if operated, may develop an acidosis, and still we must operate for the good of the patient. For instance, in a severe exophthalmic goiter, or, in a patient who has been vomiting for some time because of obstruction of the pylorus until he is dehydrated, when we know that as a result of operation acidosis may develop; nevertheless we must operate, but where operation is of choice and may be postponed, we should postpone it until we get the patient in better condition so that acidosis is not likely to supervene. I did mention the fact that the best time to treat acidosis is when it is possible to treat the case before we have the acute condition present. As to catheterization after operation, I would only say that I cannot see why the catheterizing should depend upon a certain amount of time elapsing: Why should the patient be catheterized because twelve hours have elapsed? It should depend upon the amount of urine in the bladder and not upon the number of hours that has elapsed, and that amount of urine is to be determined by a number of factors. The condition of the patient will allow you to judge whether or not secretion of urine is taking place, the amount of vomiting, and the signs elicited by physical examination. If there is sufficient urine in the bladder to warrant catheterization, we can find it out by percussion. Many of these patients have been catheterized at the end of twelve hours and only 100 centimeters removed, the patient in that case exposed to an unnecessary danger.

THE DIAGNOSIS OF GASTRIC AND DUODENAL ULCER*

E. A. MERRITT, M.D., Council Bluffs

The ability to correctly diagnose gastric or duodenal ulcer with reasonable certainty, is possessed by few men.

It would appear on superficial thought that a discussion of this subject at this particular period in the evolution of diagnostic methods, would be untimely, but when confronted with the patient presenting abdominal symptoms, the physician, if he is honest with himself and fair to his patient, must admit that he cannot secure positive information, and any other variety is worthless, without resorting to hazardous methods of interrogation.

Text-books on diagnostic methods and the procedures of common practice depend upon certain physical signs and laboratory data together with a personal history, for a diagnosis of gastro-duodenal disease.

Without quoting statistics it is apparent that no group of signs, symptoms, or laboratory findings constitute a definite and conclusive answer in the majority of instances, to the query: Has this patient a gastric or duodenal ulcer?

Furthermore there is a class of individuals who suffer from these maladies who present none of the usual evidences of the disease. Formerly, we have been compelled to rely on two methods of investigation for anything which approached absolute certainty in diagnosis.

First—Exploratory laparotomy.

Second—Autopsy.

Needless to state, the average patient resists both, and as for the former it is not unreasonable to assume that the cases of ulcer of the stomach and duodenum that have been overlooked by competent surgeons in their explorations within the abdominal cavity, exceed those that have been correctly diagnosed by this method.

As a matter of fact there is no safety in implicit reliance in any or all of the usual means of investigation in this class of diseases. All signs fail in dry weather, may be paraphrased to read, all signs fail when one is most anxious to determine positively if his patient has an ulcer.

Exploratory laparotomies offer the nearest approach to perfection, but they have the serious handicap of being extremely dangerous, usually expensive and always unpleasant.

The writer lays no claim to original ideas nor even to the necessary skill involved in the modern strictly American application of the roentgen ray

in gastric ulcer, but in common with an ever increasing group of physicians he is becoming more and more convinced that by this means, we have at our disposal, an inexpensive, harmless and unobjectionable method whose accuracy is commensurate with its skillful application.

Gastric ulcers are demonstrable by means of the roentgen ray because of the defects they produce in the stomach wall and because of the behavior of the organ when an ulcer is present. As they involve that portion of the stomach near the pylorus on the lesser curvature or the posterior wall, the field to be interrogated is correspondingly limited.

Duodenal ulcers are capable of demonstration for the same reasons, save that 95 per cent. occur in the first portion of the duodenum in an area that can be covered by a silver dollar.

A normal duodenum presents characteristic shadows on a plate or screen, regular in shape and smooth in outline and ulcers of this structure, which have persisted long enough to be designated as such, will produce a deformity of the contents of the duodenum, so absolutely constant that a normal outline is positively impossible when an ulcer is present.

The Europeans have devised a series of inferential roentgen signs accompanying gastric and duodenal ulcer, which, though valuable, are far from being positive. They resemble the ordinary clinical examination, in that certain group signs point to ulcer, yet not with unvarying constancy, hence are not final and conclusive.

Certain American workers have felt the necessity of a more satisfactory technique, and one that would yield positive results and have therefore come to base their conclusions on the fact that ulcers invariably produce defects in the gastric shadow; that these defects are constant and that a normal outline is an impossibility when an ulcer exists.

It is quite apparent to one who has given the matter more than superficial thought, that our school has much the best of the argument for the method depends upon an actual demonstration of the lesion and while the expense of serial plates is greater, the expenditure is amply justified by the end results.

There are five variations from the normal barium shadow in gastric ulcer.

First—Barium passing through the stomach wall due to a perforation.

Second—Barium in the ulcer crater.

Third—Deformity of the barium shadow from induration in the stomach wall.

Fourth—Persistent hour glass stomach.

Fifth—Pyloric stenosis.

*Read before the Iowa State Medical Society, Sixty-Fifth Annual Session, Davenport, May 10, 11, 12, 1916.

A precise technique is of the utmost importance. The development of the apparatus for making rontgenograms or performing rontgenoscopy has reached a point where today's work can be duplicated with certainty tomorrow and results are consequently uniform. The writer has had enough gastro-intestinal examinations so that he may conscientiously refer to his experience and it leads him to conclusions similar to other American workers.

The majority of patients with gastric symptoms have functional diseases, hence one becomes more familiar with the normal stomach than with the diseased.

The hour glass stomach, perforating ulcer, perigastric adhesions, etc., are unusual enough, always to be interesting. The danger to the patient and to the science being the zeal which prompts the novice to read into the screen or plate abnormalities that do not exist. The lack of standardization of apparatus and multiplicity of methods have hindered rather than enhanced the work.

There are important improvements to be made along the line of perfection of apparatus, but we are rapidly approaching the time when serial rontgenograms of the pylorus and duodenum to the number of a dozen or more may be had in any rontgen ray laboratory for a nominal sum. There is no doubt in the writer's mind that the refinement and perfection of apparatus and technique, will lead to as satisfactory results in ulcer of the stomach and duodenum, as are now secured in mastoid disease. Indeed in his laboratory, that point has almost been reached. Further, it is his hope that all men who take up this work, will adopt standard procedures and develop them to the highest possible degree.

For the purpose of emphasizing this point, he would call your attention to the numerous vehicles for the administration of barium or bismuth in use today.

One individual prefers malted milk, another buttermilk, a third cereal and milk and still another a nauseating compound of raspberry syrup, potato flour and water. As a matter of fact, there is no excuse for using bismuth. It is many times more expensive than barium and no better.

As for the menstrum in which it is best administered, the writer has used buttermilk, artificial preferred, for more than two years. It has never in his experience been vomited, can always be secured, is inexpensive and requires little time and no skill to prepare. The question of position of the patient during the examination is one to be determined at the time of examination. The screen examination is made by the writer first in

the upright position with the patient facing the examiner, while two glasses of buttermilk containing six ounces of barium, are drunk. An effort is made, which is usually successful, to fill the cap or first part of the duodenum while the patient stands. Position, form, contour and peristalsis of stomach noted and made a matter of record.

If the cap is normal, this fact is likewise recorded together with the motility of the duodenum.

The number of plates necessary to establish a diagnosis is a matter which cannot be definitely determined until the examination is completed.

In the average patient the writer exclusively employs a Coolidge tube, together with a very sensitive plate without a screen. Following the examination in the upright position and the making of the necessary plates, the patient is placed on the horizontal rontgenoscope. The pyloric antrum and duodenum are best filled with the patient on his right side. Frequently a very satisfactory fluoroscopic image may be secured of the pylorus and duodenum, while the patient maintains the lateral posture. The best rule to follow is one that produces satisfactory results and no two patients are exactly similar in the matter of rontgenoscopic visualization of the stomach. The subject is under observation the better part of an hour, and returns in six hours for continued observation. At the end of this time, the plates are studied and notes of the examination renewed, when it is possible to give a satisfactory statement as to findings. The writer further secures a careful history from each patient and inquires into the condition of the teeth, tonsils and general health. He also has made a practice of giving a test meal, to all stomach cases, analyzing same according to accepted methods, but he considers this of minor value. *Gastric and duodenal ulcers do not produce typical changes in gastric secretion with sufficient regularity to be of enough value to warrant the unpleasant features connected with the operation of removing the stomach contents.* Examinations of the stools for occult blood have been discarded because they are without definite value, and decidedly objectionable both to patient and physician.

The writer recalls two cases in connection with this phase of the subject which conclusively settles the question:

One—Patient a business man, forty-five years of age with a history suggesting gastric ulcer, with positive evidences of same by means of serial plates and the rontgenoscope. Repeated and careful examinations were made for occult blood in the stool with negative results. In connection with this there was

a subacidity. The patient was advised that he had a surgical disease of the stomach or gall-bladder, and was subsequently explored and a large ulcer of the duodenum demonstrated.

Second—Case was that of a young man with definite ulcer history and hyperchlorhydria and hypersecretion with positive findings by means of the roentgen ray for ulcer. This man was referred to a prominent gastro-enterologist in Chicago, his home town. A negative diagnosis was returned until the case had been under observation ten days, because of the absence of occult blood. At the end of this time, bleeding began and the writer's diagnosis was confirmed.

There is this much to say with reference to the roentgen method of diagnosis: It is either correct or not. If a gastric or duodenal ulcer can be demonstrated with anything which approaches certainty in the majority of cases, then it is positively the method of choice.

The writer holds that the stomach is a closed book to the average physician, who does not employ this method, and while this may appear to be a radical statement, it can be truthfully and convincingly demonstrated.

It has only been three years since one of the most prominent gastro-enterologists of this country took the position that the roentgen ray was a superfluity and a dangerous method of diagnosis. If he still clings to this delusion, he is assuredly in very restricted company.

The opportunities afforded by the larger clinics for the investigation of this subject cannot be paralleled by any physician in a private practice and it is to be regretted that so much valuable time has been frittered away in at least one of the more prominent medical centers in clinging to an antiquated technique. The writer acknowledges that in general the x-ray diagnosis of gastric ulcer has been left to the salesman for the apparatus and also that prominent men have reluctantly acknowledged its superiority, but he recalls that no innovation in medicine has come without a host of protests and adverse comment.

In conclusion, it is to be hoped that the progressive physicians of this society will avail themselves of the opportunity of studying gastrointestinal cases by means of the roentgen ray.

The most valuable chapter of the roentgen ray in diagnosis is being written in the United States by Americans. To them, the medical profession, in common with the world, owes a debt and gratitude.

Discussion

Dr. Thos. A. Burcham, Des Moines—I was indeed glad to hear Dr. Merritt's paper on gastric and duodenal ulcer. He has left but little for me to say. I would, however, like to emphasize the fact that,

as regards the examination of the stomach, especially in suspected gastric or duodenal ulcer cases, the teaching of the past has been to take into consideration certain symptoms. But as Dr. Merritt said, American roentgenologists are now demonstrating the lesion more accurately on the plate; that is, they are endeavoring to demonstrate, by fluoroscopy and a series of plates, a definite lesion, and not considering the symptoms complex of as great value as former writers did; such as hypo- and hyperperistalsis, six hour residue, etc. Not long ago I heard an x-ray salesman say that one could place a patient on the table, and by means of the x-ray see the gastric ulcer. That is all very true, you can see the gastric ulcer if you know it when you see it. It is a matter of interpretation, that is, recognizing the thing that you find. A man purchases a certain apparatus, is shown how to turn on the current and get an image, but if he can not interpret it, of what use is it? What I want to emphasize is the fact that it requires training along this line the same as along any other line for one to become proficient, and for his interpretation to be of value. As to the matter of diagnosis of gastric lesions, there are a good many things that have to be taken into consideration, especially in regard to spasm of the stomach, as to whether produced by lesion within or without the stomach. These things can only be worked out by practice, and determined after careful study and experience with reference to the clinical history and the laboratory findings, such as tests for the acidity and blood, and examinations of the stool, I have found that these are of value in a certain portion of cases.

Dr. Bundy Allen, Iowa City—I would like to know if the essayist finds any great number of ulcers of the stomach that he could demonstrate by the x-ray, that a surgeon can not feel without opening the stomach. Also I would ask him to give us the typical signs to be found.

Dr. M. J. Moes, Dubuque—I certainly appreciate this paper on pyloric ulcers of the stomach. Necessarily the introduction of a subject of this kind comes in a new field, and one cannot, in a paper as brief as this, explain all the minute details that enter into conditions of this kind. I believe Dr. Merritt stated correctly when he said that a large per cent. of these cases are of nervous or reflex origin, and for that reason one's diagnostic skill is taxed to a greater extent in lesions of the stomach proper, than in accurately locating many of the lesions that we find in the duodenum itself. Practically the question is resolving itself into a series of plates taken at short intervals to catch the stomach in its rapid motion, because unless we can demonstrate an ulcer in the same location we are not warranted in making a diagnosis of ulcer of the stomach or duodenum alone.

Dr. Alexander Lambert, New York City—I was very much interested in the Doctor's paper on x-ray diagnosis of ulcers of the stomach and duodenum, because I know that he has taken the correct stand

that for an accurate diagnosis of a good many conditions of the stomach, the x-ray is far in advance of any of our previous methods of gastric examination. There is no question of the accuracy of the x-ray diagnosis, provided we have a man who understands the diagnostic peculiarities that are necessary. I think it takes just as much training to make x-ray diagnoses as for a pathologist to make diagnosis of a shred of tissue under the microscope. Those of us who see a good many x-ray plates of cases that we send now and then to the roentgenologist, realize that we can not appreciate the fine points that they see and get out of plates, and, there is no question but it requires a great deal of painstaking skill and accurate study to get the most out of it, but when once the ability to do the work in an efficient manner is acquired, I agree absolutely with Dr. Merritt that it is the very best method and the only method by which accurate diagnosis in these obscure cases can be made. There is one class of gastric and duodenal cases that the x-rays have differentiated very accurately, from the gastric and duodenal ulcers, the x-ray alone has done it and deserves the credit; those cases of hyperchlorhydria, with or without pain, that have all the clinical symptoms of duodenal or gastric ulcer and yet not due to any lesion in the stomach or duodenum, but due to lesion of the appendix or lower down in the cecum. Those are puzzling cases, and unless diagnosed by means of the x-ray, the error has frequently been made and patients honestly operated on, with no lesions found except those of the appendix or in its region. The only method of diagnosis in these cases is by the x-ray; the clinical symptoms are absolutely the same. I do not believe that one can invariably determine by the ordinary gastric examinations what the character of the secretions may indicate, because the nervous control of the functions of the stomach is such that the findings are baffling even to the men who spend the greatest amount of time in a study of the subject, but the more we have used the x-ray during the last few years, the more do we find it deserving of confidence, and the greater becomes the conviction that the predictions and statements made by Dr. Merritt today will be found true.

Dr. Merritt—There is little to add. The impression seems to have gone out generally that an expensive outfit is all that is necessary to make an x-ray diagnosis; in other words, that the apparatus will do the work. There are very few men in the United States who rank as experts in this line of work, and I believe that as a matter of fact there are none in the state of Iowa who can be called expert roentgenologists, but there are many who want to be some day. Answering Dr. Allen, I understand the question to be if it is possible that an ulcer may be diagnosed by the roentgen ray, and then not be found when laparotomy is made. That has been done a number of times, and it is easily understood. Not long ago a leading surgeon of this country failed to find an ulcer of the stomach demonstrated by one of

the best roentgenologists in the United States, and acknowledged his error in a letter which was published in the Journal of the American Roentgenological Society.

REFLEXES OF THE APPENDIX*

H. H. ENNIS, M.D., BAXTER

In man as well as in other mammals, there are two brains which, while performing different functions, are of equal importance to the welfare and existence of the individual. The cranial brain, the speaking brain, presides over mental and sensate functions. It gives origin to thought and feeling. To many this overshadows all the other phenomena of human life, and it is true that the great nerve centers, situated within the cranial cavity, dominate man's worldly existence. It is the fountain head from which intellectuality flows that distinguishes man from all other animals; here also resides consciousness, which guides and protects him physically and morally.

The other brain is the abdominal brain or belly brain which presides over organic life, the director of rhythm. It receives sensations and transmits motion. In view of the fact that all physiological function depends upon rhythm, all physiological life would be nil without it. The abdominal brain is an automatic brain ganglion, consisting of two ganglia situated about the celiac axis lying just behind the stomach. It is composed of a net-work of nerve ganglia and is made of a union of the two pneumogastric and the right phrenic. It is the head center of the great sympathetic, and through its ramifications communicates with every part of the body.

We will take up briefly the sympathetic system with its lateral chain of ganglia. Without going into detail we have three cervical ganglia, eleven thoracic, four or five lumbar, four sacral and the ganglion impar where these cords terminate. The upper ends of these two ganglionated cords meet within the cranial cavity in the ganglion of Ribes, located upon the anterior communicating artery.

The superior cervical ganglion sends ascending branches which accompany the carotid artery, and dividing into the carotid and cavernous plexuses sends fine twigs to the pituitary body, the sympathetic root of the ciliary ganglion, communicating branches to the third, fourth, and ophthalmic division of the fifth cranial nerves, and terminal branches to the ophthalmic and cerebral branches of the internal carotid artery. The carotid plexus sends branches to the sixth cranial

*Read before the Austin Flint-Cedar Valley Medical Society, Iowa Falls, Iowa, July 11, 12, 1916.

nerve, to the Gasserian ganglion, the tympanic or small petrosal, the great deep petrosal which joins the superficial petrosal of the facial nerve. The superior cervical cardiac branches given off from the lower part of the ganglion terminate in the superficial cardiac plexus.

The middle cervical ganglion gives off the middle cardiac branches.

The inferior cervical ganglion gives off an inferior cardiac branch.

The lower six or seven thoracic ganglia form the three splanchnic nerves, distributed to the semilunar ganglion and the renal plexus.

The four or five lumbar ganglia send branches to the aortic plexus and the hypogastric plexus, and four sacral ganglia also send branches to the hypogastric plexus.

It is claimed by some that visceral ganglia are located in each organ similar to those in the heart muscle, and are concerned in the physiologic and pathologic function of the organ. In the muscular structure of the digestive tract there exists Auerbach's plexus which governs the rhythm of the part while Meissner's plexus, located in the submucous layer determines the secretory function of stomach and intestinal digestion. Excretion, whether normal or pathological, is governed by the same force. This same principle may be supposed to apply to the kidneys, liver, pancreas and other organs.

This illustrates that the prevertebral plexuses are connected with the thoracic, abdominal, and pelvic viscera as well as the cranial structures through their communication with the cranial ganglia. There is also a sympathetic sheath of nerves that accompanies every vessel to each organ and structure of the body, controlling its blood supply. The vaso-motor nervous system is a unit and is practically independent of the cerebrospinal system. If it is irritated in any of its nervous centers or periphery, function may be disturbed in any part of the body. All rhythmical action is under its control. Non-rhythmical action of some organ may exist through cerebrospinal inhibitory dictation but at the same time nutrition, the very life of the organ, depends upon the functioning power transmitted from the sympathetic system. Secretion, excretion, nutrition and absorption are governed by it and all digestive function is under its control. Through an irritation of any of the sympathetic parts, the whole economy may be thrown into disorder both structural and functional.

It is conceded that all cases of appendicitis are of microbic origin. The germs are ever present ready to take advantage of any morbid disturbance. The colon bacillus, staphylococcus, and

streptococcus are the chief agents responsible for this disease. And besides these are a host of other pathogenic bacteria which excite inflammation and cause chronic degenerative tissue changes.

The appendix being plentifully supplied with lymphoid tissue is a factor favoring the inflammation to which the organ is subject. The primary focus is usually the mucous coat but in serious infections, extends to the submucous, muscular or serous covering, with congestion of the vessels, stasis of blood exudates and frequently hemorrhagic infarction. If suppuration does not occur, the infiltration causes thickening of the walls, giving it the characteristic hardness so often observed. This condition seldom subsides during the intermission between attacks but usually increases with each recurrence.

The fibrinous exudate contracts and pressure changes occur in the tissues distorting the anatomical structures, often stricturing or obliterating the lumen. There are also adhesions to adjacent organs. There is an involvement of sympathetic nerve filaments causing irritation that is passed to the abdominal brain and then sent over connecting branches to the stomach, bowel or liver, perverting their function. You may get indigestion, or the colon may be interrupted in its function, resulting in constipation. It may be reflected to the genito-urinary organs, causing an endless chain of symptoms. In fact wherever a sympathetic filament is distributed, the function of physiological processes may be disturbed. The normal function of all organs depend upon sympathetic nerve action.

To illustrate I wish to report the following cases that have come under my observation:

Case 1 Mr. A., age thirty-two, of good habits and uniformly good health all his previous life. About three years ago was attacked with a mild form of appendicitis. He suffered from recurrences every few weeks. During these attacks he had but slight nausea, cramps or fever. During the intervals he complained of more or less tenderness over the appendix and suffered from indigestion, constipation and insomnia. He lost weight gradually and became nervous and melancholic. He brooded over his condition and neglected his duties until his family became sensible of his mental impairment and urged him to have an operation for the cure of the trouble to which he finally submitted. At operation there was no evidence that a suppurative condition had ever existed. There were slight peritoneal adhesions and some infiltration. It was a chronic catarrhal appendicitis.

Recovery from the operation was uneventful, he immediately began to improve and within a few months was well in every way.

Case 2. Mr. L., age thirty, a real neurasthenic who had been treated by a number of physicians of more or less prominence; among them a reputable surgeon who placed him in a hospital and kept him under daily observation for two months; varied diagnoses had been made and all kinds of treatment had been tried. He suffered from all the pains that usually accompany the different forms of neurasthenia, the most pronounced of which was in the back, neck of the bladder and glans penis; the latter distressed him most of all, while he constantly referred to the genito-urinary organs as the seat of his greatest suffering.

Examination revealed a hypersensitive condition of the colon along its entire course and considerable tenderness over the appendix. As no evidence of actual disease of the genito-urinary tract could be found, it was decided that the appendix was responsible for the whole train of symptoms.

The diagnosis was accepted and the patient went immediately to the hospital for operation. The appendix was the size and two-thirds the length of a lead pencil, the walls were thickened, the lumen more or less obstructed and adjacent structures more or less congested. The patient left the hospital on the seventh day and the pains and aches disappeared as if by magic. The most remarkable relief was from the irritation at the neck of the bladder and glans penis. His appetite improved and he gained in weight and felt as well as ever.

Case 3. Mr. W., age thirty-nine, consulted me in June, 1915, on account of abdominal pain referred more especially to the region of the gall-bladder. He was a laboring man who had enjoyed comparatively good health except that he gave a history of more or less trouble of a similar nature for about a year past. He had been a heavy drinker up to about a year and a half ago. He gave a history of frequently vomiting after eating a meal which was corroborated by his employer. This I concluded was due to a gastritis, perhaps of long standing.

On examination the temperature was found to be normal and the pulse normal. There was marked tenderness over the region of the appendix, a diagnosis of chronic appendicitis made, and he was told that he would probably never be well until he had it removed. He would not consent to operation and although he had good days, was unable to do his regular work. The attacks of pain and discomfort increased in severity and in February he finally consented to an operation.

Operation revealed a rather long appendix with a club shaped end, slightly adherent and extending backwards and upwards. He made a very rapid recovery and returned home on the seventh day free from all pain. His appetite was better than for many months previous, digestive function normal and he gained in weight and after three weeks resumed his regular work. One rather interesting thing in this

case is that up to the present time he has not vomited since the operation.

THE PAVILION MILITARY HOSPITAL FOR LIMBLESS SOLDIERS, BRIGHTON

The Pavilion Military Hospital for limbless soldiers has now been open for several months, and an account of the work done there will furnish proof of the wisdom of the War Office in organizing special hospitals for the treatment of special varieties of war injuries. Other hospitals on similar lines have been established at Bray in Wicklow, Belfast, Glasgow, and Kelso. The Brighton hospital contains 610 beds, all reserved for limbless soldiers. The primary function of this institution is to put limbless soldiers into a condition which will enable them to be fitted with artificial limbs at Roehampton or one of the other similar institutions.

Before transference to Roehampton, it is necessary that a man shall be absolutely ready to have an artificial limb fitted. All sinuses must be healed, all bulbous nerve endings removed; the patient must be free from all adhesions limiting the normal movements of the joints, and all joints flexed by scar tissue must have been kept hyperextended for a considerable period.

Of the cases admitted to the Pavilion it is found that some seventy per cent. require further treatment; the removal of bulbous nerve ends, or osteophytic growths, or necrosed bone, or there may be some sepsis which needs attention. It is satisfactory to announce that all the cases are put into a condition to have an artificial limb fixed, and the surgeons at Roehampton have stated that they have never had a case in which some form of artificial limb cannot be fitted; the average duration of treatment at the Pavilion is two months. After notification of cure to Roehampton only a few days elapse before the men are transferred from the Pavilion. Owing to the great demand on the beds available, arrangements are being made for sending selected cases on furlough till accommodation can be provided at Roehampton provided they have suitable homes to go to."—(British Medical Journal.)

WAR LOSSES IN THE PROFESSION IN GERMANY

The Munchener medizinische Wochenschrift of September 26, quotes statistics showing that the German casualty lists, 1 to 600, have contained the names of 343 physicians, including 104 active army or navy surgeons, 128 physicians of the reserves, 102 assistant surgeons and 8 civilian physicians; 185 have died of disease, a total of 528 deaths among the members of the medical profession with the German army and navy. In addition to these, 176 have been severely and 553 slightly wounded; 156 have been taken prisoners, and 87 are missing. The total figure is thus 1,500.

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THE STATE LIBRARY AGAIN

The Legislature will convene in the early part of next year, and those who are interested in developing a State Medical Library, should at the earliest moment possible, take the matter up with their member. It is impossible to say how large a percentage of the medical profession desire a medical library, but it is fair to presume that there is a very considerable number that feel that Iowa should have a medical department of the state library at Des Moines. Of course it is to be naturally expected that Des Moines, the largest city, and the largest and most influential professionally, would stand first in this propaganda. We know of a considerable number of the members of the Polk County Medical Society who will contribute liberally of their time to the development of a library campaign, and the criticism that the Des Moines profession would be indifferent to a state library, is unjust. The criticism falls upon the Polk County Medical Society in not undertaking to do what has been done in so many other cities, that is building up a society home and library. It is perhaps wiser that all the Polk County Medical Society influence should be used in the direction of a state undertaking rather than a local one. We hope, therefore, that not only the profession in Des Moines, but the profession in other parts of the state, will feel the importance of this matter. It is desirable that the state should supply the university with a working library, but the big reference library should be in Des Moines, and should be controlled by the state librarian. There can be no question about this if we are to have a library that is worth considering.

CHICAGO AS A MEDICAL CENTER

We have through the lay press, received some news in relation to the prospective development of medical education in Chicago. This will be very gratifying to the medical profession through all the Western section of the country. For some years past, and particularly since the commencement of the war in Europe, we have felt that the centers of medicine would drift from Germany to the United States. It is very well known that no European medical center will come into existence for another generation at least, and the great opportunity has come to the United States, a fact which farsighted members of the profession realized before the war troubles in Europe began. The question very naturally has been what city in the United States would have the scientific spirit to develop a medical center. We had many centers of population that were eagerly seeking commercial enterprises, but a center of medical activity must be recognized as somewhat different from a center of commercial activity. Many have felt that Chicago was the natural center for an undertaking of this kind, but the spirit of antagonism to scientific medicine which has so often manifested itself in Chicago, has led to a serious question of doubt in the minds of the outside profession if Chicago could do this.

For some years past, the men who have made Chicago's medicine and surgery famous, have been excluded from active participation in the medical councils of the city of Chicago, and unfortunately they have been barred from prominent activities in the profession of the state. This has been due largely to the influence wielded by the city of Chicago. There has been in Chicago a constant and determined opposition to the development of the American Medical Association, and the question has arisen from time to time whether it would not be better to move the headquarters of the American Medical Association to some more friendly location.

When the American College of Surgeons was considering the question of permanent home, there was a large vote against Chicago because of its unfriendly attitude to recognized medical activities.

No possible doubt can be raised as to the ability of Chicago to become the leading medical center of this country and of the world. The question is, will the profession of Chicago stand for the sacrifice to high ideals, which such a move demands. Eight or ten millions of dollars have been planned to place the University of Chicago as the trustee of this great undertaking. This movement also must necessarily contemplate the

joining of the influences of the three medical colleges located there for one common purpose and under the direction of one of the greatest medical minds in the world, Dr. Frank Billings. The profession outside will watch with interest the attitude of the profession in Chicago, and while we believe beyond all question of doubt that there is to be found in Chicago a group of strong, able and willing medical workers who are competent to build up the great contemplated institution, the question still arises whether the medical atmosphere in Chicago is congenial to such an undertaking.

MEETING OF THE AMERICAN ASSOCIATION OF MEDICAL EDITORS

October 25th this organization met at the McAlpin Hotel, New York City. A very excellent program was prepared and discussed by some of the foremost men in medical journalism. Among them were George M. Piersol, M.D., American Journal of Medical Sciences; Thomas L. Stedman, M.D., Medical Record; W. B. Snow, M.D., Journal of Electro-therapeutics and Radiology; H. E. Lewis, M.D., American Medicine; F. E. Stewart, Practical Druggist; J. McDonald, Jr., M.D., American Journal of Surgery; and Ira S. Wile, M.D., American Medicine.

The papers covered a wide range of journalistic interest and were freely discussed.

We were interested in the views expressed in relation to state journals which formed the burden of a number of papers.

Two or three papers are worthy of special note. In the first place it was objected that state journals did not constitute the best medium for reaching a full audience when subjects of wide interest were discussed. It was held that the independent journals would be better than state journals for that reason. It would certainly be a serious matter to bury valuable contributions in journals of limited circulation, and if it is true that a well prepared paper will not reach an audience beyond the limits of the state, the policy of the state journal should be broad enough to allow the author to publish simultaneously in journals of his own selection. This would constitute the best means of encouraging valuable contributions by leaders in the profession, and if there are state journals that fail to accord the author such privilege, it is quite possible that they will not secure the best contributions.

A weak point in state journalism was mentioned in connection with the making of the secretary of a state society, secretary-editor. The objections to this method on the part of state so-

cieties was really a subject of logical criticism. We all know that there are various reasons for electing certain candidates to the position of secretary of a state society, and among them may not perhaps be literary gifts or any gifts for journalism or any special liking for the detail work that must necessarily fall to the editing of a journal if a journal is expected to carry much influence, and on the other hand it might happen that a very excellent man for editor of a journal, would not be desirable for the office of secretary of the state society, but it by no means follows that proper material cannot be found for both positions. Some of the strongest and best edited state society journals are edited by the secretary of the state society, so that the argument presented by the Editor's Association against secretaries of state societies being editors, was not a very strong one and could have no application except in instances where the secretary was elected because of his political skill without any regard to his mental qualifications, but we cannot lose sight of the fact that it is possible for the combination to work harm in the development of state society journalism.

Another sore spot that seemed to irritate the editors of independent journals was the attitude of state journals in relation to advertising. In this connection perhaps may be added that their entrance into the field itself was an objection because it was an obstacle to the circulation of the private journals. It was held that the subsidized state journals were unfair competition and that many of the independent journals would likely suffer very seriously from the competition, and there was a possibility of some of them being abandoned. It was apparent that the higher class of advertisers preferred journals that would inquire into the character of their advertising because it may be readily understood that the ethical advertiser would not like to appear in company with many concerns that would like to place their products before the professional public. It was clear that there was a feeling of uneasiness among independent editors outside the great journals, which have a recognized position in medical literature and will always be a medium through which the best prepared and most scientific medical productions will appear.

A feature of special interest at this meeting was the discussion of the anti-narcotic law. The New York physicians were especially irritated by the state laws in relation to prescribing narcotic medicines. Conditions existing in New York City have led to state legislation which is much more exacting than the national law. Judge Collins of the Court of Special Sessions, dis-

cussed very fully conditions existing in New York City, basing the discussion on a great number of cases that have come before his court. It appears that a very great degree of activity exists in what is known as the "underworld" in smuggling and distributing opium and cocain. The judge stated that large quantities of opium were smuggled in from Canada; that there was a group of men who were legalized practitioners, who operated with certain distributors of opium among the unfortunate at a very great profit. The exceedingly artificial life of this class of people, the extraordinary pressure brought to bear upon them in one way and another, has led to the securing of opium at whatever cost and at whatever hazard. A most deplorable condition was shown to exist, and that the present laws, although exacting, were absolutely necessary according to the minds of public service workers, in order to guard a decent public condition. The profession of New York have made strenuous objections as was shown by a discussion of the burdensomeness of the New York act, but Judge Collins held firmly to the belief that there would be no modification in the way of making the laws less effective.

Dr. E. S. Bishop, Professor of Clinical Medicine, New York Polyclinic, and President of the Medical Board of the Department of Corrections, New York City, gave a strong argument in favor of a fuller knowledge of what drug addiction really meant. He held that the subject had not been studied in such a scientific way as to give a clear understanding as to what addiction was. The laymen's idea seemed to be that drug addiction was the result of a habit cultivated voluntarily or brought about artificially through the prescription of morphine and cocain by the physician. Dr. Bishop was inclined to believe that addiction was a disease and should be treated as a disease rather than treated in the courts as a crime. His arguments appeared to be very logical, and that was the belief of the medical gentlemen who participated in the discussion; that in the first place a thoroughly scientific study should be made of drug addiction, and then the laws modified in such a way as to consider the morphine and cocain habit as diseases and be treated as diseases by scientific men rather than determined by the courts of law. Dr. John D. Davin, representative of the Federation of Medical Economic Leagues, was very emphatic in his denunciation of the New York law, and how it came to be passed and how it was administered, that it was not in any way helpful to humanity, but rather brought inexpressible suffering to un-

fortunates and a great burden of responsibility and trouble to the physician.

Mr. B. C. Keith, Chief of the Miscellaneous Division of the Internal Revenue Bureau, Washington, discussed the national anti-narcotic act, admitting the difficulties that lay in the way and expressing the feeling that it was the intention of the Government to reduce the inconvenience to the medical profession to the smallest degree and only to punish the ones in the medical profession who were distributing narcotic medicines for commercial purposes; that when the Government was convinced that any man was prescribing opium with a proper consideration of the rights of the public, there was no intention to interfere with his work but the moment it became apparent and the evidence showed it to be a fact that he was dealing in narcotic drugs for purely commercial purposes and without regard to public welfare, then he should be prosecuted and punished. The New York law apparently almost made the prescribing of morphine and cocain a criminal act, while the national law only intended to control the commercial exploitation of these agents by doctors who availed themselves of certain rights conferred upon them by their license to practice.

CONVOCATION OF THE AMERICAN COLLEGE OF SURGEONS, PHILADELPHIA

We were able to reach Philadelphia in time to attend the Convocation of the American College of Surgeons. Two hundred new members were admitted; one hundred of whom were admitted on examination. Manager Bowman detailed the manner and thoroughness with which examinations were conducted, which served to show that out of one hundred applicants, only forty succeeded in passing, while sixty failed either temporarily or permanently. Mr. Bowman, who will be remembered as the ex-president of the Iowa State University, presented in very strong language the attitude of the College of Surgeons in relation to certain evils that had grown up in the profession and the commercialism that threatened to destroy the good name of the profession. He expressed a firm determination to investigate every suspicious case of fee splitting, and as soon as it became reasonably apparent that any member of the College was guilty of this sort of thing, he would be brought before the Board and expelled. One name was presented as having been investigated by the regents and expelled by them. There are also others that are

undergoing the process of investigation and will likely be expelled at the next Convention.

The meeting of the College was a truly inspiring one and could not fail to convince any person that there are men scattered over the country having the highest ideals of what the profession should be, and sternly determined to bring to the public notice, men that were commercializing and thus discrediting the profession. The body of men that were gathered on the occasion, could not fail to impress one with the feeling that the medical profession was after all a noble calling and one full of the spirit of public welfare and would ultimately separate those that practice for the good of humanity from those who are governed by purely commercial considerations.

After administering the Hippocratic oath to the new members, the Fellowship Address was delivered by President John F. Finley, of the University of the State of New York.

Dr. J. M. T. Finney, President of the College, at the close, gave a short address, offered his resignation and announced that Dr. Geo. W. Crile of Cleveland had been elected by the Board of Regents as the new President of the College.

TYPHOID FEVER AN ACCIDENT

The interpretation of workmen's compensation acts is of general importance at the present time while their provisions are under consideration by legislators throughout the country. The Wisconsin Supreme Court (Public Health Reports, February 11, 1916) recently decided that the death of an employe caused by typhoid fever contracted as a result of drinking impure water furnished by the employer was an accident and the employer was held liable under the Wisconsin Workmen's Compensation Law.

Peculiarly among the facts cited is the discharge of the sewage of the employing establishment into the river. The employer utilized water from this river by means of intake pipes so located that they carried water contaminated by sewage. This contaminated water supply owing to defective piping became mixed with the pure water of the city water works. The employe by drinking this polluted water fell ill with typhoid fever and as a result died.

The court held that the mere affliction with typhoid fever while in the defendant's service could not be deemed accidental injury. The typhoid fever, however, being attributable to the unexpected occurrence of bacteria in the drinking water furnished by the employer as an incident to employment constitutes an unexpected and unintended mishap growing out of his employment and thus the infection occurred while "he was performing services growing out of and incidental to his employment." Diseases thus contracted are injuries within the construction of the workmen's compensation act.

DEATH OF SIR LAUDER BRUNTON, BART.

The Canadian Medical Association Journal for October, announces the death of Sir Lauder Brunton, Bart., with the following obituary notice:

"It is with much regret that we have to announce the death of Sir Lauder Brunton, Bart., on September 16th, of advanced arteriosclerosis, at his home in London. He had recognized for several months that the end was coming quickly. Attacks of anginal pain occurred on slight exertion, and about the middle of August he wrote to his friends in Montreal that he knew he could not live longer than a few weeks more.

Sir Lauder Brunton may be regarded as the father of English pharmacology. As a student of Schmiedeberg, he devoted much time to the study of the exact action of drugs, and his large volume on "Pharmacology, Materia Medica and Therapeutics" was for many years regarded as the best presentation in English of modern pharmacology. He was a prolific writer, and all his contributions to therapeutics and medicine were characterized by sound judgment and careful clinical observation. Among his best known works are the following: "Relation of Chemical Structure to Physiological Action;" "Disorders of Digestion;" "Disorders of Assimilation;" "Lectures on the Action of Remedies;" and there were many others.

His younger son at the commencement of the war resigned his position as resident physician in St. Bartholomew's Hospital and joined the army; unfortunately he was killed in action. His eldest son, who was married recently to the daughter of Professor J. B. Porter of McGill University, is at present serving on Brigadier-General Wilson's staff at Valcartier.

C. D. ENFIELD, M.D., JEFFERSON, IOWA

Iowa State Medical Journal,
To the Editor:

Sir: If I may be permitted to offer comment on your editorial in the October issue on the ownership of x-ray plates, I should say that there should be no question about this matter.

The roentgenologist is not in the business of taking pictures at so much per picture; he earns his fee by making or confirming a diagnosis and the plate is his record of his examination. The patient or the surgeon pays for the diagnosis, not the plate, and as the roentgenologist is, or should be, more competent to read the plate than either the surgeon or the patient, the plate can have no particular value to either, but should be the sole property of the roentgenologist.

It is I believe customary for the plate to remain in the roentgen laboratory from the time of its production, the surgeon being furnished with a report accompanied, if he wishes to come and see it, by a demonstration of the plate. The patient should usually not be allowed to see the plate, in referred

cases, for reasons which the case you have cited illustrate very well.

Of course the above does not apply to the commercial x-ray laboratories which are truly x-ray photograph galleries, making "pictures" at so much per picture rather than diagnoses. However, as no well informed surgeon would care to refer his x-ray work to such an institution, they need not enter very largely into the problem.

Yours respectfully,

October 19, 1916.

C. D. ENFIELD.

IONIZATION OF CICATRICES

In the British Medical Journal for September 16th is an abstract of a paper by M. M. Chiray and Bourguignon from La Presse Medical on the treatment of contracted or adherent cicatrices of the limbs by ionization with potassium iodide

"They used the town supply reduced, and zinc or tin electrodes covered preferably with asbestos. The solution contained 1 per cent. of potassium iodide in distilled water. The current was localized as far as possible to the cicatrix. A negative electrode with its covering soaked in the iodide solution, was applied over the cicatrix, and a positive, wetted with water only, was placed on the other side of the limb. The intensity of the current used with an electrode 60 cm. square, was generally 10 milliamperes, and each sitting lasted half an hour. The first effect noticed was a change in colour; the cicatrix became paler by degrees. At the second stage of treatment the cicatrix became thinner and less indurated and the epidermis more supple. At the third stage the cicatrix was loosened from the deeper parts, and moved easily over them. At this stage it might be necessary to use other means to relax or break down adhesions about joints, but by the ionization treatment alone the muscles and nerves involved in the cicatrix might be freed and contractures might then disappear. A sitting was given at first every day and from an early stage the surgeon began to mobilize the skin and, if possible, the joint. In some cases an extraordinary improvement was observed in eight or ten days, but in the majority not until after five or six weeks; in some, treatment had to be extended over three or four months before improvement was marked, and it is said that as a rule treatment should not be discontinued until some such period elapsed.

BOOK REVIEWS

PROGRESSIVE MEDICINE

A Quarterly Digest of Advanced Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Armory Hare, M.D., Professor of Therapeutics, Jefferson Medical College, Philadelphia. Assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia, Sept. 1, 1916,

Volume 19, No. 3, Lea & Febiger, Philadelphia and New York. Six Dollars Per Annum.

This volume is a medical and obstetrical contribution. The first subject treated is Diseases of the Thorax and its Viscera, Including the Heart, Lungs and Bloodvessels, by William Ewart, M.D., F.R.C.P., and is a very scientific exposition of the newer things that have found their way into medical literature. The study of diseases and conditions of the thoracic organs has been pursued with great diligence in the recent past, and vast literature has accumulated, much of which has been carefully abstracted and digested by Dr. Ewart.

The literature on Dermatology and Syphilis has been examined by Dr. William Gottheil and careful conclusions drawn from it and from his own vast experience as to the value of many things that have appeared. The Autoserum Therapy has been considered in 62 private patients, psoriasis 31 cases, eczema 6, pemphigus 5; acne 5; furunculosis 4; chronic urticaria 4; and one case each of folliculitis, leprosy, parapsoriasis scleroderma, lichen planus, dysidrosis and ulcerative radiodermatitis. Dr. Gottheil says the autoserum treatment is in no sense, save in exceptional cases, a curative measure; appropriate local treatment is required in every case.

THE MEDICAL CLINICS OF CHICAGO

The Medical Clinics of Chicago; September, 1916, Volume 2, Number 2. Published Bi-Monthly by W. B. Saunders Company, Philadelphia and London.

From the Cook County Hospital Clinic by Dr. Williamson there are two subjects; Acute Millary Tuberculosis and Syphilis of the Liver, both as to history, diagnosis and management.

Dr. F. Tice from the same clinic presents a case of Carcinoma of the Pancreas; interesting because of the many errors of diagnosis in cases of this kind. Dr. Tice also presented a case of Chronic Bronchitis, Emphysema and Cyanosis.

Cook county furnishes two other clinics: Dr. M. M. Portis a case of Syphilis of the Stomach, Dr. A. F. Beifeld, a Differential Diagnosis Based on Blood Examinations.

At the Michael Reese Hospital Clinic, cases were presented by Dr. A. Abt, Dr. S. Strouse and Dr. J. C. Friedman. Dr. Abt discussed Feeding the Normal Baby with Artificial Food Preparation, a subject always interesting to the family physician who often finds his skill and ability tried to the fullest extent.

At the Northwestern University Medical School Clinic, Dr. R. C. Hamil presented a group of neurologic cases and Dr. Joseph Zeisler a study on the etiology and treatment of acne, and at Mercy Hospital, Dr. C. L. Mix studied a group of rather unusual medical cases.

PHARMACOLOGY AND THERAPEUTICS FOR STUDENTS AND PRACTITIONERS OF MEDICINE

By Horatio C. Wood, Jr., M.D., Professor of Pharmacology and Therapeutics in University of Pennsylvania; Second Vice-Chairman of the Committee of Revision of the U. S. Pharmacopia—Second Edition, J. B. Lippincott Company, Philadelphia and London. Price \$4.00.

The name of Wood has been closely associated with pharmacology and therapeutics in Philadelphia since 1833 when Dr. George B. Wood in connection with Dr. Franklin Bache wrote "The Dispensatory of the United States." In 1856 Dr. George B. Wood published a "Treatise on Pharmacology and Therapeutics."

Then followed Horatio C. Wood who was also a distinguished writer on Therapeutics, and published a "Treatise on Therapeutics" in 1877 which reached the seventh edition in 1888 from the famous publishing house of J. B. Lippincott and Co.

Now comes Horatio C. Wood, Jr., from the same publishing house, offering to the profession the second edition on Pharmacology and Therapeutics.

It has been our pleasure to study and acquire what knowledge we have of therapeutics from this long line of ancestry, for the "Treatise on Therapeutics" by Dr. George B. Wood was still a standard work when we began the study of medicine, and the work on Therapeutics by H. C. Wood, Sr., was our inspiration when we began lecturing on this subject thirty-seven years ago.

Comparing the two large volumes of 1856 (2000 pages), by Geo. B. Wood with H. C. Wood of 1888, (1000) and H. C. Wood, Jr. of 1916 less than 500 pages, affords some food for thought as to what is happening in this branch of medicine. Each of these works have represented the best in therapeutics of the day. Assuming that our faith in therapeutics and pharmacology has not changed, our knowledge of the physiological action of therapeutic agents is immensely greater, and the application more definite. It will be a sad day in medicine when therapeutic nihilism takes possession, but it is to be most sincerely hoped that a more intelligent and more scientific spirit of drug administration will be the rule.

The work before us retains the remedies that experience has shown valuable and adds some twenty new substances that have passed the test of experimental study and therapeutic experience.

The special value to be attached to the work of Dr. Wood is its clear, definite and authoritative manner of presenting therapeutic agents. We trust that it will fall into the hands of a multitude of practitioners whose drug treatment needs thorough revision.

THE CLINICS OF JOHN B. MURPHY, M.D., AT MERCY HOSPITAL, CHICAGO

Edited by P. G. Skillern, Jr., M.D., of Philadelphia, October, 1916, Volume 5, No.

5. W. B. Saunders Company, Philadelphia and London. Published Bi-Monthly. Price Per Year \$8.00.

The first subject presented is a discussion on Varicose Veins and Varicose Leg Ulcers, a subject in which every general physician and surgeon is interested and often needs helpful advice. Following is a series of thirty cases presented by Dr. Murphy at the Chicago meeting of the Surgeons of the B. & O. Ry.

In this number is a valuable series of clinics on the bladder, urethra and prostate. The results of operative treatment on these organs is so definite, either in relief or failure, that the occasional operator needs all the help possible, and this was probably in Dr. Murphy's mind when these subjects were presented.

There are other subjects of much interest offered in this number that we cannot consider in detail.

DISEASES OF THE SKIN

By Henry W. Hazen, A.B., M.D., Professor of Dermatology, Georgetown University. Published by C. V. Mosby Company, St. Louis, Mo.

The author states that it is his aim, to supply a book on skin disease that shall be neither a quiz-compend on the one hand, nor too voluminous on the other. His aim seems to have been realized, for he has given us a well written and well arranged work, with adequate illustrations, in compact form.

Dr. Hazen lays stress upon the study of the histopathology of the skin as being essential to intelligent diagnosis and treatment. This diagnosis, based upon a systematic and thorough examination, is developed by the author by the aid of a key or schema, advising against trying to guess or use short cuts, but advancing a few general rules which indicate broadly the probabilities.

The treatment of diseases of the skin, is, as said by the author, largely empirical. He advises against the use of a large number of drugs, rather using a few of whose action or influence he is certain, an axiom applicable to all treatment.

This work is certainly a justifiable addition to medical literature, and can be highly recommended.

HOW TO LIVE—RULES FOR HEALTH LIVING BASED ON MODERN SCIENCE

By Irving Fisher, Professor of Political Economy, Yale University; and Eugene Lyman Fiske, M.D., Director of Hygiene of the Life Extension Institute. Eighth Revised Edition, 1916. Funk & Wagnalls Company, New York and London. Price \$1.00 Net.

This book represents the highest ideals of medicine as regards public health. A group of the ablest physicians, scientists and philosophers have joined in a campaign for hygiene and life extension and through various publications have sought to bring

to the public a knowledge of the things that go to make a strong people individually and collectively. The relation of the medical profession to the public is undergoing a radical change. It is not now a fundamental proposition to determine what medicine or means may be employed to cure a sick person but what may be done to conserve health. How shall an individual live to bring individual strength and efficiency. The great industrial problems of the future must depend upon the health, vigor and efficiency of the individual. We are now passing through a trying period in the history of nations and we are awakening to a realizing sense of what manhood and womanhood mean as never before.

The book before us, written by one of the foremost philosophers of the age, together with the collaboration of distinguished physicians, presents to the public a scheme of individual action which will serve to answer all the questions concerning health, strength and efficiency.

We in the United States have been prone to give little heed to health when we have it and if by chance we become sick we seek some doctor who with bottles of medicine, pills and tablets, attempts to restore us to former health; all this must come to an end if we hope to hold our place among civilized nations and seek the doctor rather than his medicines.

PRACTICAL MEDICINE SERIES

General Surgery, Vol. II of the 1916 Series of the Practical Medicine Series. Edited by Dr. J. B. Murphy of Chicago. Price \$2.00.

Eye, Ear, Nose and Throat. Vol. III of the 1916 Series. Edited by Drs. Casey C. Wood, A. H. Andrews and G. E. Shambaugh, all of Chicago. Price \$1.50.

These volumes are published by the Year Book Publishers. Herein is the essence of the literature for 1915, and the editorial comments are pointed and practical. Many cuts and half tones are included in the text.

THE ROCKEFELLER FOUNDATION

International Health Commission. Second Annual Report, January 1, 1915, December 31, 1915. Offices of the Commission, 61 Broadway, New York.

The great work of the Rockefeller Commission in the southern section of the United States and the scientifically undeveloped foreign countries with which we have, or hope to have trade relations, is set forth in this report. "During the year the International Health Commission has co-operated with ten southern states and with thirteen foreign countries in work for the relief and control of hookworm disease."

The activities of the Commission are fully outlined in the report and convey to the public mind the immense advantages medical science is conferring upon the heretofore almost useless humanity in-

habiting a wonderfully productive section of the world and to trade and commerce.

INTERNAL REVENUE REGULATIONS NO. 35

Law and Regulations Relating to the Production, Importation, Manufacture, Compounding, Sale, Dispensing or Giving Away of Opium or Coca Leaves, Their Salts, Derivatives or Preparations. Revised May, 1916. Washington, Government Printing Office.

ANXIETY BECAUSE OF CHANGES IN MEDICAL EDUCATION

Since the campaign for the improvement of medical education began in this country, alarm has been expressed by several individuals because of certain possible results of the campaign. Some have worried lest the marked reduction in the number of medical colleges would lead to a dearth of physicians in the United States. Others have noticed the greatly increased cost of medical education, and the moderately increased charges for tuition, and are afraid lest only the "sons of the rich" will be able to secure a medical education, which, they say, will result in a "medical aristocracy." Others show much concern lest the higher standards for admission and the demise of numerous low standard colleges will take away all opportunities from "the poor boy" who wants to get a medical education. Still others have laid stress on the thinly populated and rural districts which, they reiterate, are "greatly in need of doctors." These statements have been made mostly by persons interested in the continuance of low standard colleges. Some, however, have been made by those having no interest in such schools and who are evidently sincere in their expressions of anxiety. There are, indeed, fewer colleges, students and graduates; the cost of a medical education has been greatly increased; there has been also a moderate increase in the charges for tuition; entrance requirements have been raised and a lot of inferior medical colleges have ceased to exist. It is also granted that rural communities do not have many doctors living in them. A right interpretation of these facts will show that there is no cause for alarm. On the contrary, great benefits have been derived from the campaign for an improved medical education. The chief result is that physicians are being turned out who are better able to serve the public both in urban and in rural communities.—(Journal American Medical Association.)

CO-OPERATION IN SOCIAL INSURANCE INVESTIGATION

During the last ten years, The Journal has frequently commented on the development of social insurance in Germany, England, Denmark, Norway and Sweden and other European countries. No other social movement in modern economic develop-

ment is so pregnant with benefit to the public. The opinion has been expressed repeatedly that the problems involved in the conservation of the health and physical efficiency of laboring men and women in this country, and those in moderate circumstances must, sooner or later, become a vital issue. The Journal has emphasized that in each of the countries mentioned, members of the medical profession, although directly and vitally concerned in the administration of any social insurance plan, had without exception awakened too late to the importance of the question. As a result of their own lethargy and inactivity, they took no effective part in molding the legislation, and were forced to accept what was given them by the legislators and economists rather than to claim that to which they were justly entitled. In England, the country which most recently has adopted a general social insurance plan, Lloyd George, in framing his bill, consulted workmen, employes, employers, officers of labor unions, representatives of the "friendly societies," economists, sociologists and legislators, but until the bill was practically ready for presentation in the House of Commons, it apparently did not occur to any one to consult representatives of the British Medical Association, although the assistance and co-operation of physicians were absolutely indispensable to the successful operation of the law. Coming into the discussion late in the day and after many of the essential principles involved had been determined, the representatives of the British Medical profession were able to secure with extreme difficulty only a part of the concessions which they demanded. As the Journal has repeatedly pointed out, experience in other countries has clearly demonstrated that in the course of a comparatively short time the question of social insurance will become an important issue in this country. Physicians in the United States should profit by the experience of our professional brethren abroad and interest themselves in this question while it is still in a formative period.

This prediction has already been realized. Social insurance legislation in a more or less crude form has already been adopted in several states. Anticipating the introduction of bills on this subject in other states and desiring to harmonize such efforts as far as possible, the American Association for Labor Legislation sent out last fall a preliminary draft of a model bill on this subject, asking for criticisms and suggestions for its improvement. That the American Medical Association was awake to the importance of the situation was demonstrated by the admirable report presented to the House of Delegates at San Francisco in 1915 by Dr. Alexander Lambert, chairman of the Judicial Council. At the same time that the American Association for Labor Legislation sent out its tentative bill, it also through its secretary, Dr. John B. Andrews, asked for the co-operation of the American Medical Association in drafting the sections of the bill which apply to physicians and their relation to social insurance. The problem involved embraces both the ethical and economic relations of individual physi-

cians and the social relations of the profession as a whole. It is, therefore, plainly one which comes within the province of both the Judicial Council and the Council on Health and Public Instruction. After due consideration by these two councils, a special committee was authorized, consisting of the chairmen of the two councils and a third member to be selected by the chairmen. This committee, as constituted in December, consisted of Dr. Alexander Lambert, chairman of the Judicial Council, as chairman, Dr. Henry B. Favill, chairman of the Council on Health and Public Instruction, and Dr. Frederic J. Cotton of Boston. Dr. Favill's untimely death in February was a severe loss to the committee. One of the last official acts of his life was to appear before the Board of Trustees at their February meeting with Dr. Lambert and to plead for a liberal appropriation for this committee. The Board of Trustees, realizing the importance of this work, made an adequate appropriation for the coming year. Headquarters for the committee have been established at 131 East Twenty-third Street New York, in close co-operation with the offices of the American Association for Labor Legislation. Dr. I. M. Rubinow, author of "Social Insurance," has been secured as the executive secretary of the committee.

This action should result in a careful, authoritative study of the many and complicated problems involved in social insurance, and should make it possible for the American Medical Association to render valuable aid in solving this important social problem. A preliminary report on the subject will be presented at the Detroit session, but it will probably require two or three years' work to collect the necessary data and arrive at definite conclusions as to what is to be the position of the medical profession of this country in the ultimate solution of the problem. In the meantime, it is urged that individual physicians and medical organizations refrain from isolated active efforts, either for or against social insurance bills in state legislatures, in order that the attitude of the profession on this subject may be harmonious and that its influence may be exerted unitedly and effectively.—(The Journal of the American Medical Association, May 6, 1916.)

NEW AND NON-OFFICIAL REMEDIES

Since publication of New and Non-official Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies."

Radium Bromide, W. L. Cummings Chemical Company—It complies with the standards of N. N. R. and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

Radium Carbonate, W. L. Cummings Chemical Company—It complies with the standards of N. N. R. and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

Radium Chloride, W. L. Cummings Chemical Company—It complies with the standards of N. N. R. and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

Radium Sulphate, W. L. Cummings Chemical Company—It complies with the standards of N. N. R. and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

Borcherdt's Dri-Malt Soup Extract—A powder obtained by adding potassium carbonate 1.1 gm. to each 100 gm. of Borcherdt's Malt Extract and evaporating. Borcherdt Malt Extract Co., Chicago.

Borcherdt's Dri-Malt Soup Extract with Wheat Flour—A powder obtained by evaporating 100 gm. Borcherdt's Malt Soup Extract and 50 gm. wheat flour made into a paste. Borcherdt's Malt Extract Co., Chicago.

Borcherdt's Finished Malt Soup Powder—A powder obtained by evaporating 100 gm. Borcherdt's Malt Soup Extract, 50 gm. wheat flour, made into a paste and 330 gm. milk. Borcherdt's Malt Extract Co., Chicago (Jour. A. M. A., March 11, 1916, p. 815).

Saubermann Radium Emanation Activator—An apparatus for the production of radioactive drinking water by the action of radium sulphate. Each apparatus is designed to furnish about 500 cc. radioactive water per day. The exact daily capacity and efficiency are guaranteed and are stated for each apparatus. The following strength generators are offered:

Saubermann Radium Emanation Activator, 5,000 Mache Units—An apparatus which imparts about 1.8 microcurie (5,000 Mache Units) to about 500 cc. water daily.

Saubermann Radium Emanation Activator, 10,000 Mache Units—An apparatus which imparts about 3.6 microcurie (10,000 Mache Units) to about 500 cc. water daily.

Saubermann Radium Emanation Activator, 20,000 Mache Units—An apparatus which imparts about 7.2 microcurie (50,000 Mache Units) to about 500 cc. water daily.

Saubermann Radium Emanation Activator, 50,000 Mache Units—An apparatus which imparts about 18 microcurie (50,000 Mache Units) to about 500 cc. water daily. Radium Limited, U. S. A., New York (Jour. A. M. A., March 18, 1916, p. 893).

COMING MEETINGS

THE AMERICAN CONGRESS ON INTERNAL MEDICINE

The first scientific session of the American Congress on Internal Medicine will take place in New York City, December 28 and 29, following the meeting of the American Association for the Advancement of Science. The meeting which will be held at Hotel Astor, will be called to order by President R. W. Wilcox at 10:30 A. M. Thursday, the 28th. Following the dispensation of the preliminary work,

the afternoon meeting will be called at 2 P. M., at which time the subject selected by the Council of the Congress, "The Ductless Glands in Cardio-Vascular Disease and Dementia Precox," will be presented. Dr. Charles E. de M. Sajous, of Philadelphia, will be the referee for the cardio vascular diseases, while Dr. Judson Daland, of Philadelphia, will act as co-referee for the cardio-vascular diseases, and Dr. Francis X. Dercum, of Philadelphia, will co-referee for dementia precox. Following the presentation of the subject, the discussion will be opened by Drs. Harlow Brooks and Smith Ely Jelliffe, of New York, and Dr. Wm. A. White, of Washington, D. C. A banquet will be held at 7:30 P. M.

At 10:30 A. M. on Friday, the 29th, a meeting of the Council of the American College of Physicians will be held. Following the Council session, a Symposium on Duodenal Ulcer will be presented. Dr. John B. Deaver, of Philadelphia, will consider the "Diagnosis," and Dr. Max Einhorn, of New York, the "Prognosis" of the disorder. Dr. Gedide A. Friedman, of New York will present The Possible Dependence of Gastro-Duodenal Ulcer in Man Upon a Disturbance of Internal Secretion, while Dr. Fenton B. Turck, of New York, will consider Venous Stasis and Colloidal Diffusion as Etiological Factors of Gastro-Duodenal Ulcer. In the evening, the Convocation of the American College of Physicians will take place. According to Dr. Heinrich Stern, secretary-general of the American Congress on Internal Medicine, the primary purpose of the Congress is to corral the men of our country, who are devoting themselves to research and clinical work along the lines of internal medicine, so that such internists may attain prominence and financial remuneration equal to that enjoyed by the members of the profession who devote themselves to surgical work."

SOCIETY PROCEEDINGS

At a meeting of the Allamakee County Medical Society held at Waukon, November 28th, the following officers were elected for the coming year: President, J. C. Crawford, vice-president, J. Huecker; secretary-treasurer, C. W. Rominger; delegate to state society, Otto O. Svebakken, all of Waukon.

The November meeting of the Cerro Gordo County Medical Society was held at the court house in Mason City, November 28th, Dr. S. A. O'Brien read a paper on Local Anesthesia and Dr. B. F. Weston had for the subject of his paper, Nephrolithiasis. The interesting subject of fee splitting was brought before the society and thoroughly discussed.

The society unanimously condemned the dividing of fees as unethical, nefarious and dangerous.

The regular meeting of the Clinton County Medical Society was held at Clinton, November 24th at LaFayette Hotel. Papers were read by Drs. B. C. Knudson, J. C. Langan, Grace Schermerhorn, H. A.

White, R. F. Luse, G. L. Bartlett and H. J. Heusinkveld, Jr.

The Des Moines County Medical Society met at Burlington, November 8th. The program furnished by the Lee County Medical Society was:

Treatment of Fractures—C. R. Armentrout, Keokuk.

Treatment of Eclampsia—J. R. Walker, Fort Madison.

Infected Wounds—W. P. Sherlock, Keokuk.

Mortuari Te Salutamus—F. C. Roberts, Fort Madison.

The Jefferson County Medical Society met November 28th at the home of Dr. C. C. Tallman, Fairfield. Dr. F. M. Tombaugh, of Burlington, read a very interesting paper on Extra Uterine Pregnancy. In closing the discussion, the Doctor related a very interesting case upon which he had a few months ago operated for extra uterine pregnancy and at the same time finding a normal intra uterine pregnancy. The intra uterine pregnancy went on to term and a normal child was delivered. Following the program and discussion a luncheon was served by Mrs. Tallman.

The Polk County Medical Society held their monthly meeting November 28th in the Hotel Savery at 8 P. M. At this time due honor was given to Dr. Archelaus G. Field, who has practiced medicine sixty-six years. Dr. Field, who was one of the early workers in the field of micro-photography, presented many lantern slides, illustrative of what can be accomplished in this field of endeavor. Dr. James Taggart Priestley favored the society with Reminiscences, and many were the pleasing incidents and anecdotes related by the essayist of the transaction of the local society in an early day.

Dr. D. S. Fairchild presented the subject, The Iowa State Medical Society, 1865-1915. It is needless to state that the narration of the early career of the State Society was extremely interesting as well as fascinating.

Iowa medicine owes much to such men as A. G. Field, J. T. Priestley and D. S. Fairchild, and the writings and teachings of these men are to be especially recommended to the consideration of the younger generation of medical men as examples of what hard work, conscientious application, and untiring zeal will accomplish.

The annual meeting of the Pottawattamie County Medical Society was held December 5th at Grand Hotel, Council Bluffs. Dr. A. A. Robertson of Crescent, read a paper on Gastric Ulcer. Dr. S. D. Maiden, of Iowa City, read a paper on Some Causative Factors in Glaucoma as Observed in the London Hospital during the present hostilities. Papers were also read by Drs. C. A. Hill and M. E. O'Keefe, of Council Bluffs.

The annual business meeting of the Ringgold

County Medical Society was held at Mount Ayr, Thursday, November 16th. There was a large attendance of physicians from all over the county and from adjoining counties. The following officers were elected: President, L. F. Talley, Diagonal; vice-president, O. L. Fullerton, Redding; secretary, Samuel Bailey, Mount Ayr; board of censors, Wm. Howe, M. F. Hannelly, L. F. Talley; delegate to the state society, O. L. Fullerton, Redding. Following the business session two very able addresses were delivered by Daniel J. Glomset, of Des Moines: Laboratory Aid to the Diagnosis and Treatment of Syphilis, and Serum Therapy.

The annual meeting of the Scott County Medical Society was held at the Commercial Club rooms, Davenport, November 8th. Those present were profitably entertained with an illustrated lecture by Dr. Henry Matthey. Dr. Matthey related in detail some of the rare surgical work observed in his service in the German base hospital. A high tribute was paid the Red Cross movement in Germany, which organization through its efficiency, has been one of the mainstays of the country. As a measure of preparedness, Dr. Matthey stated that "committees of the German Red Cross in peace times secured options on suitable locations for hospitals and entered into agreements with contractors and laborers, in the eventuality of war, as well as contracts with merchants to supply them immediately with surgical instruments, food, bandages and various other necessities. All these contracts were made years ago in the event of war."

Dr. Matthey stated that our own Red Cross organization is doing a great service abroad and that the United States are only in a measure beginning to appreciate the value of its work.

Much emphasis was given the efficient sanitation in the prevention of epidemics. This war so far, with the exception of Servia and some of the Russian camps, has been free from epidemics of various character.

The officers elected for the ensuing year are: President, J. F. Dunn; vice-president, Frank Neufeld; secretary, Roscoe P. Carney; treasurer, Sidney G. Hands, all of Davenport. A large representation of the membership was in attendance.

At the meeting held December 5th papers and addresses were given by Drs. E. F. Hoover, J. S. Webber and J. V. Littig.

At the meeting of the Wapello County Medical Society held October 30th, the paper of the evening was read by Dr. W. C. Newell on "Tumors of the Salivary Glands." Confusion may be caused by a growth starting, for example, in a lymph gland enclosed in the parotid substance. The benign tumors were taken up first and described. Their diagnosis discussed and treatment outlined. The different forms of malignant growths in these glands were taken up, first as primary infections, then as secondary to some other infection. The history of each age at which tumors may appear was pointed out

and the diagnosis, especially from the differential standpoint, was reviewed as was also the prognosis and treatment. Ranula was also described. Here the treatment was drainage or complete excision.

At the meeting November 21st, Dr. W. B. LaForce read a very interesting and instructive paper on the Diseases of the Cervical Lymphatics. The subject of infection of these glands was discussed thoroughly, the sources being the mouth, teeth, pharynx, nose, etc., as well as the external parts of the head. Acute infections, their cause, diagnosis, and treatment were reviewed, especial attention being given to Ludwig's angina which is often fatal. Tuberculosis of the glands was considered extensively. The treatment, being originally medical, had for a time become almost exclusively surgical, and now again more medical, except in instances where massive formation threatened life, or other clear indications pointed to surgery. Malignant disease of the cervical glands is always sarcoma, if primary, but may be carcinoma secondary to some other growth. The treatment in primary cases is early and complete removal, the use of the x-ray and Goley's fluid, if sarcomatous. In secondary cases, the indications in each case are to be met according to circumstances.

The twelfth annual meeting of the Second District Medical Society of Iowa, under the presidency of W. H. Rendleman, Davenport, was held in Davenport, November 14th. The scientific program at 1:30 P. M. at Hotel Davenport was:

The Conduct of Pregnancy—Joseph L. Baer, Chicago.

Visceral Syphilis—C. P. Howard, Iowa City.

Diuretics and Diuresis—Chas. H. Neilson, St. Louis.

Functional Nervous Diseases—J. F. Herrick, Ottumwa.

Clinical Aspects of Disease of the Hypophysis and Allied Ductless Glands—Dean Lewis, Chicago.

Over one hundred physicians from Iowa and Illinois were in attendance. After the program an elaborate banquet was enjoyed by the members and guests at Hotel Blackhawk.

Officers elected for the year are: President, E. B. Gilbert, Geneseo, Ill.; vice-presidents, Henry Matthey, Davenport, and J. L. Crawford, Cedar Rapids; secretary, J. V. Littig, Davenport. Any member of the Iowa or Illinois State Medical Society is automatically a member of the Second District Medical Society without the formality of application.

Miss Maude Slye, of Chicago, was a guest of the Women's Clinical Society of Des Moines, November 9th. The various medical societies of Polk county were invited to meet and hear her describe her work in the Otto Sprague Research Laboratory of Chicago. Miss Slye discussed the heredity of tumors in mice and showed a large number of charts representing her findings which extended over a number of generations. Miss Slye is unassuming in manner, direct and clear in her statements concerning her

observations about tumors in mice, and is a master in her knowledge of heredity.

The Des Moines Pathological Society, held its regular monthly meeting at the Chamberlain Hotel, November 24th. The attendance was good and the program exceedingly interesting.

Dr. W. L. Bierring exhibited a new instrument for collecting the duodenal contents, explained its usage, and its advantages over some of the methods now in vogue. Dr. J. A. Downing explained how fragments of steel can be accurately located in the eye ball and many times quickly removed by means of an electro-magnet. Dr. Howard D. Gray gave a report of a fatal case of infection of the scalp:

Mr. R., age forty-three years reported for treatment of a small supra-aural pimple, right side, at or about the hair margin. The lesion was incised under alcohol sterilization and dressed on alternate days for one week, when edema and local swelling of adjacent scalp area became manifest. Patient was referred to Mercy Hospital where the original incision was enlarged and the edematous area drained and packed. Pulse 120, temperature 104, no headache or systemic symptoms. On the following day, temperature was to 106° F., the pulse to 140; there was marked hemiparesis, but the mental condition seemed normal. On the succeeding day, patient became depressed, pulse and temperature remained high, mental status nil, coma and later death ensued. Autopsy revealed a septic meningitis, the superior longitudinal sinus being filled with pus organisms. Dissection of calvarium with outer table removed, showed direct communication between diploic veins and emissary veins through superior margin of the right parietal bone.

Dr. Gershom H. Hill exhibited a male patient who is now suffering with the eighth attack of manic-depressive insanity. All of the attacks were of the manic type and all the previous attacks, except the present and the one preceding, were completely recovered from. The mental derangement began at the age of twenty-six years, the patient being now sixty-seven years of age. He has been twice at the Mount Pleasant State Institution, three times at the Clarinda State Institution, and three times a patient at The Retreat.

IOWA CLINICAL MEDICAL SOCIETY

At the meeting of the Iowa Clinical Medical Society held in Iowa City on Saturday, December 2nd, the following program was given, the demonstration taking place in the University Hospital.

Dr. C. P. Howard showed a case of trichiniasis, and gave the history and findings in another case. He presented also a case of uncinariasis in a man who had never been outside of Iowa.

Dr. C. Van Epps presented a case of atypical multiple sclerosis, one of Jacksonian epilepsy, and one of tabes showing unusual features.

Dr. H. Jemkinson demonstrated on the tabetic

patient the technic of intra-spinous medication as employed in the use of salvarsanized serum.

Dr. F. J. Rohner discussed the question of Transfusion and then demonstrated the technic, first withdrawing the blood of the donor into a two per cent. solution of citrate. The amount of blood taken was such that the final dilution was 0.2 per cent., a strength that is not toxic. This was then injected into a case of pernicious anemia.

Dr. L. Baumann read a paper giving a brief review of the application of biochemistry to medicine.

Dr. A. C. Davis described the various reactions in examinations of the duodenal contents.

The members of the society then visited the clinical laboratories where Dr. F. Hirschberg showed various diagnostic methods.

After dinner at the Jefferson Hotel, the formal meeting of the society was held, Dr. Granville N. Ryan, president, in the chair.

The following members were present: G. N. Ryan and J. S. Weingart, Des Moines; C. A. Waterbury, E. F. Stevenson and G. McConnell, of Waterloo; C. P. Howard and C. E. Van Epps, of Iowa City; J. W. Shuman and W. G. Rowley, of Sioux City; E. A. Merritt, of Council Bluffs; W. H. Rendleman, of Davenport; F. M. Fuller, of Keokuk, and F. G. Murray, of Cedar Rapids.

After the business meeting Dr. F. A. Stevens gave a very interesting talk on the Values of the Various Renal Functional Tests.

Dr. Howard gave a resume of the cases shown by him in the morning. The case of uncinariasis was in a railroad man who had been associated with several Mexicans in a section gang. Although there was no evidence to prove same, yet the probabilities are that they were the carriers. Discussed by Weingart, Fuller, Merritt and McConnell.

Dr. Van Epps' case of multiple sclerosis had come to the clinic complaining of flat feet and some trouble in walking. The tabetic was particularly interesting on account of the very sudden onset of the ataxia, a unilateral Argyll-Robertson pupil, and peculiar areas of sensory disturbances. The eye that did not show the pupillary reflex was the non-functionating one of strabismus.

The advisability of operating upon the case of Jacksonian epilepsy was discussed, the opinion being adverse in this particular instance.

Discussed by Howard, Fuller, Shuman and McConnell.

Dr. Rohner's demonstration of transfusion elicited much discussion as to its value in pernicious anemia. This also brought up the matter of splenectomy. The consensus of opinion was that not enough time has elapsed since the operation was first undertaken to prove its value. The value of transfusion in pernicious anemia was seriously questioned. The matter was discussed very fully by Howard, Weingart, Fuller, Ryan, Shuman and McConnell.

Dr. Baumann's paper was discussed by Howard and Rendleman. The next meeting will be held at Waterloo, March 3rd.

GUTHRIE McCONNELL, Secretary.

AUTUMN MEETING OF THE AUSTIN FLINT-CEDAR VALLEY MEDICAL SOCIETY

The Austin Flint-Cedar Valley Medical Society held its annual autumn meeting at Charles City, November 14th, under the presidency of Dr. Nicholas Schilling of New Hampton.

A large attendance of the members enjoyed the following scientific program:

Dr. C. O. Epley, of LaPorte City, read a paper on The Significance of Corpus Luteum. Paper discussed by Drs. Griffin, Kenefick, Cutler and Kessel, with closing remarks by Dr. Epley.

Dr. F. A. Hennessey, of Calmar, read a paper on Some Observations in Anterior Poliomyelitis, with discussion by Drs. Epley, Fox, Ghent, Cutler, Percy, Kenefick, Walsh and Hennessey.

Dr. M. N. Gernsey, of Waverly, read a paper on Mouth Infections. Discussed by Drs. Epley, Kenefick, McNeil, W. A. Rohlf, Hennessey, Ramage, Kessel, Miner and Gernsey.

Dr. W. H. Seymour, of Charles City, read a paper on Some Observations Regarding Maximum Doses. Discussion by Drs. Gernsey, Epley, Ramage and Seymour.

Dr. A. J. Burge, of Mason City, was not present on account of illness. His paper on What is our Present Day Practice Regarding Cancer, and What is our Duty, was read by title and passed.

Dr. Nelson M. Percy, of Chicago, read a paper, accompanied with lantern slides, on Pernicious Anemia, With Special Reference to its Surgical Treatment and With Report of Cases. Paper discussed by Dr. Niemack, with closing remarks by Dr. Percy.

Dr. W. E. Day, of Clarksville, read a paper on Was it Sapræmia or Septicæmia? Discussed by Drs. Babcock, Kenefick, Niemack and Day.

Dr. J. F. Auner, of Des Moines, read a paper on Syphilis of the Central Nervous System. Paper discussed by Drs. McConnell, McCoughey, and the essayist.

Dr. Charles Ryan, of Des Moines, read a paper on The Use of Aspiration or Injection, and The Time for Surgical Incision and Drainage in Affections of The Knee Joint. No discussion.

Mr. A. E. Kepford, of Des Moines, read a paper on Suggestions on the Control of Tuberculosis. Paper discussed by Drs. Seymour, Babcock, Ryan and Schilling, with closing remarks by Mr. Kepford.

Dr. M. M. Ghent, of St. Paul, read a paper on Tubal Pregnancy, illustrated by lantern slides. Dr. Kenefick opened the discussion and was followed by Drs. W. A. Rohlf, Wray, Day, Ward, Percy, Kern and Graham, Dr. Ghent closing the discussion.

Dr. W. A. Arthur, of Hampton, was to have read a paper on Blood Pressure as a Diagnostic Factor. The essayist being absent, his paper was passed.

Dr. E. H. Dwelle, of Northwood, being absent, his paper on Pleurisy and Tuberculosis was read by title and passed.

Meeting adjourned to meet in Waterloo for its annual mid-summer meeting July 10, and 11, 1917.

After the scientific program, a banquet was served by the ladies of the Congregation church. Dr. J. F. Auner, of Des Moines, acted as toastmaster.

A. D. McKinley.

PRELIMINARY REPORT OF THE SCIENTIFIC COMMITTEE

The Scientific Committee of the Iowa State Medical Society, together with the section chairmen, met in Ottumwa on the fifth of the month, to further complete the plan and arrangement of the program for the Annual Session next May. President Herick reported that he had received the acceptance of Dr. Harvey Cushing, of Boston, to deliver the Address on Surgery, and a suitable running mate would be selected from among our national internists to deliver the Address on Medicine. The program as planned is entirely completed, and while in its nascent state might be considered as a somewhat radical departure from the ones previously rendered, still, the committee hope, with the closing of the May session, that the consensus of opinion will be that the program was the best ever given in the history of the Society.

1917 DUES

The time is rapidly drawing nigh when the members of the Iowa State Medical Society will be approached in some manner by the secretaries of the various county medical societies with the request for the payment of 1917 DUES. In this connection it may be well to state that the fiscal year of the State Society begins January 1, 1917. Dues for the coming year, however, are payable in advance and should be in the hands of the state secretary on or before January 1st. Any member who has not paid his dues is in suspension and during that period is deprived of all the rights and benefits with which he was formerly endowed as a member of one of the best medical organizations in this country.

The House of Delegates at the last annual session fixed the dues and their apportionment as follows: Annual dues per member \$5.00. General Society Expenses including the Journal \$2.00; Medico-Legal Fund, \$2.00; Special Assessment for 1917, \$1.00. All of these good things for \$5.00.

Doctor, make yourself a Christmas present by promptly and cheerfully paying your secretary the dues when he calls on you.

STARCH AND TABLE SALT SOLD AS NEOSALVARSAN

The recent indictment by the Federal Grand Jury in Newark, N. J., of "Dr." Jean F. Strandgaard, of Toronto, Canada, and George F. Hardacre, of Toronto, and a steward on the steamship "United States," has revealed to Chief Inspector E. R. Norwood, of the Customs Service in New York, what he believes to be a widespread conspiracy to defraud the Government out of customs revenue by smug-

gling salvarsan and neosalvarsan into the United States.

A most serious feature of this matter is the discovery by Inspector Norwood that these men also had in their possession a large quantity of spurious neosalvarsan. Upon analysis by the Government experts, the contents proved to be starch in the majority of the ampules and stained table salt in the others.

A further investigation showed that during July, 1916, Strandgaard had 15,000 ampules made in Jersey City, which upon his instructions were filled by the glass blower with either starch or salt. A remarkable coincidence is that during August and September, and as recently as the time Strandgaard was arrested in New York, physicians and drug stores all over the Middle West and the East were approached by women trying to sell, on the one pretense or another, the frauds made for Strandgaard. These spurious products were put up in imitation of either the German or particularly the English package, as marketed by the German manufacturers in England before the war, in square pasteboard cartons. They did not appear in round aluminum packages, like the American package. They are very cleverly executed, and their outside appearance even led experienced physicians to be deceived.

The product has been sold in New York, Chicago, Milwaukee, Cincinnati, Peoria, Kalamazoo, Detroit, Terre Haute and Mobile, and other Western and Southern cities, and is undoubtedly still being peddled on account of the great profits accruing to the saleswomen.

There is no need to call the attention of physicians to the dangers connected with the use of such frauds. In view of the serious and possibly fatal results which would follow the administration of these fraudulent salvarsans, it is incumbent upon medical men who have any information about the distribution or sale of these frauds to communicate with Chief Inspector E. R. Norwood, U. S. Customs House, New York, at their earliest opportunity, or, in case of emergency, with the local police authorities.

THREE HUNDRED NEW MEMBERS

With this issue of the Journal, our 1916 printing contract closes, and before entering into the work of the new year, it may not be altogether inopportune to point out to the members of our State Society, from time to time, some of the difficulties that are to be encountered during the coming months, and to ask your hearty co-operation in overcoming the same.

The Journal of the Iowa State Medical Society, under its present regime, has been in operation for the past six years. During this time, the size of the Journal has been changed to better meet the demands of the medical profession, and the better to comply in uniformity with journals issued by other state societies.

As has been true of many other commodities, the

price of paper and other printing materials have so increased, that it was impossible to obtain a renewal of the printing contract at anywhere near the old figure. While the Journal is still to remain the same as regards specifications, quality of paper and workmanship, yet the best the Trustees could do, with the assistance of others, was to place a new contract with the same printing firm, at an increase of almost six hundred dollars for the coming year.

The problem which now confronts us to be solved, is, HOW is this increase over last year's apportionment to be met? Obviously there are several ways, but let us consider for a moment what would be the most rational and logical of any. We would suggest that each county organization enter into a campaign, earnestly and vigorously, of increasing their membership at least three or more, and at the same time to see that none of their present members backslide or go astray. THREE HUNDRED NEW MEMBERS, with the retention of our present membership, will safely carry the day, and keep this Journal in its present state of efficiency where, unhampered by debt, even greater possibilities may be attained.

WHY YOU SHOULD JOIN YOUR COUNTY MEDICAL SOCIETY

"IN ALL THAT IS GOOD, IOWA AFFORDS THE BEST." This slogan which formerly was disseminated state wide, has now been taken up in national affairs, and as an agricultural state it is conceded that Iowa leads the Union.

There is no good reason, other things being equal, why the medical profession of this grand and glorious state should not have and maintain the prestige, it well deserves. The integrity of organized medicine in Iowa depends entirely on the membership of the various county medical societies. Why then, doctor, should you as a citizen of this great commonwealth join and maintain membership in your county medical society?

The medical society of the Keystone state of the Union has ably set forth good reasons why you should join, as evidenced from the following which we have clipped from the Pennsylvania State Medical Journal.

1. Because it is a postgraduate school at home, from which you will derive pleasure and increase your practical and scientific medical knowledge from the papers read, the discussions and clinical reports, making you a better and more successful practitioner.

2. Because it is the best means to promote friendships, mutual respect and pleasant social relations in your professional life.

3. Because it is the best means of avoiding envy, jealousy, local animosity and internal dissensions which have always discredited our profession, and if you will permit them, will seriously damage your professional career.

4. Because it will help you to improve your finan-

cial condition by aiding you to better your business methods in your work.

5. Because it tends to promote unity by which the profession gains in influence and commands a higher respect from the community.

6. Because the county medical society makes it possible to unite the profession into a compact organization to its material advantage and that of each of its members.

7. Because it will enable you to progress in your medical career and become a member of the State and National Medical Associations.

8. Because you owe all this to yourself and to your professional co-workers.

MORAL: TAKE NOTICE AND GOVERN YOURSELF ACCORDINGLY.

DEATHS

Andrew L. Marugg, M.D., age forty-two; Northwestern University Medical School, Chicago, 1898; member of Dubuque County and Iowa State Medical Societies; a practicing physician for the past twelve years at Sherrill's Mound; died at Mercy Hospital, Dubuque from pneumonia, October 31st.

Jessie Veluria Smith, M.D., age fifty; College of Physician and Surgeons, Keokuk, 1892; formerly a Fellow of the American Medical Association; member of Madison County and Iowa State Medical Societies; one of the organizers of the Iowa Women's Medical Society; died at the home of her sister, in Douglass township, Madison county, after a long illness from an obscure disease of the spinal cord, November 12th.

William Fielding McQuitty, M.D., age sixty-four; University of Missouri School of Medicine, 1879; formerly a member of Woodbury County and Iowa State Medical Societies; a practicing physician for thirty-four years at Correctionville, died at his home recently from cerebral hemorrhage.

Oleriannus Alvin Cover, M.D., age fifty-four; Jefferson Medical College of Philadelphia, 1894; member of Wayne County and Iowa State Medical Societies; a practicing physician at Seymour for the past twenty-two years; was struck by a Rock Island freight train at a crossing in Scymour and instantly killed November 27th.

John E. Maquire, M.D., age forty-six; State University of Iowa College of Medicine, 1893; a practicing physician at Dubuque for twenty-three years, died at his home after a long illness, November 15th.

Norman Wilson Kncpper, M.D., age sixty-two; Long Island College Hospital, 1882; a practitioner for many years at Collins, Story county; was found dead in his bed November 28th. Cardiac disease was given as the immediate cause of his death.

Which Mineral Oil is Best for Medical and Surgical Use



1. That oil which is free from paraffin and all toxic, irritating or otherwise undesirable elements, such as anthracene, phenanthrene, chrysene, phenols, oxidized acid and basic bodies, organic sulphur compounds and foreign inorganic matter; because an oil of such purity will pass through the gastro-intestinal tract without causing irritation or other untoward effects.
2. That oil which possesses the highest natural viscosity, with the highest specific gravity, because such an oil will pass through the intestine more slowly than a lighter and thinner oil and lubricate the walls of the gut more completely, and soften faeces more effectually, and is not likely to produce dribbling.
3. That oil which is really colorless, odorless and tasteless, because palatability favors persistence in treatment.

The oil which meets all these requirements is

Liquid Petrolatum, Squibb Heavy (Californian)

It is a pure, colorless, odorless and tasteless **Mineral Oil**, specially refined under our control only by the *Standard Oil Company of California* which has no connection with any other Standard Oil Company. This oil has the very high specific gravity of 0.886 to 0.892 at 15°C. (or 0.881 to 0.887 at 25°C.) and has also an exceptionally high natural viscosity. It is sold solely under the Squibb label and guaranty and may be had at all leading drug stores.

E. R. SQUIBB & SONS, NEW YORK

MEDICAL NEWS

Dr. J. S. Gaumer, of Fairfield, after service in the medical corp in the Mexican border, has returned and will resume practice at Fairfield.

At the recent meeting of the State Board of Health thirty-two physicians were licensed to practice in Iowa.

Major Thos. F. Duhigg, of Des Moines, who is with Field Hospital No. 1, Iowa National Guards, Brownville, Texas, was called home for a short time on account of the illness and death of his mother, November 18th.

CHANGES OF LOCATION

Dr. W. F. Weidner, of Atlantic, has removed to Monroe.

Dr. James C. Patterson, of West Side, will locate in Marengo.

Dr. J. W. Chittum, of Richmond, has removed to North Liberty.

MARRIAGES

Dr. Wm. H. VanTiger, to Miss Ruth L. Brickman, both of Eldora, November 10th.

Dr. James A. Porter, of Hedrick, to Miss Florence Coates, of Conrad, November 16th.

Dr. Merédith Mallory, of Des Moines, to Miss Mary Stiles Jones, of Batavia, Ill., at Batavia, Ill., November 11th.

Dr. John F. Martin, to Miss Elsie Sawtell, both of Latimer, November 8th.

Dr. Ludwig F. Guldner, of Davenport, to Miss Bertha H. Rogers, of Byron, Ill., at Davenport, November 25th.

BIRTHS

Dr. and Mrs. Ralph H. Parker, of Des Moines, October 30th, a daughter.

Dr. and Mrs. Paul M. Hoffman, of Tipton, November 22nd, a son.

Dr. and Mrs. F. F. Wieben, of Elheron, November 21st, a daughter.

Dr. and Mrs. J. C. Ohlmacher, of Clarinda, November 24th, a daughter.

HOSPITAL NOTES

Formal dedicatory services for the new wing of the Deaconess Hospital at Marshalltown took place November 15th. The addition just completed brings the total value of the hospital and grounds to \$100,000 and affords a larger opportunity to meet the needs of Marshalltown and surrounding territory.

WITH OUR ADVERTISERS

Dr. Weirick's Sanitarium, Rockford, Illinois, formerly Dr. Broughton's Sanitarium—established 1901—for the treatment of opium, morphine and other drug addictions, including alcohol and special ner-

vous cases, is one of the best managed institutions in the middle west.

The demand for reputable institutions of this class has increased, and our endorsement of this institution should be sufficient recommendation to physicians who have cases of this kind needing sanitarium treatment. Patients receive good care, humane treatment and enjoy the comforts of a good home.

The European war, which has so profoundly affected our industries, has had a considerable influence in increasing the patronage of American health resorts. Many Americans who usually go to foreign spas, have visited home institutions instead. Furthermore, numerous residents of other neutral countries have come to the United States in search of health, who would in other conditions have gone to Carlsbad, Homburg or the hundred other health headquarters of Europe. This is particularly true of wealthy residents of Central and South America. In the last year the Battle Creek Sanitarium has had about 200 patients from abroad. The number will probably increase, for in the last three months the institution has had letters of inquiry from prospective visitors residing in the following lands: Cuba, Caiman Islands, Mexico, San Salvador, British Guiana, Venezuela, Columbia, the Argentine, Uruguay, Peru, Honduras, Italy, Switzerland, Russia, England, Germany, India, Japan, the Belgian Congo and Australia.

NEW HEAD FOR FRANK H. BETZ COMPANY

Mr. Louis R. Curtis, formerly of St. Luke's Hospital, Chicago, has been elected president of the Frank S. Betz Company, Hammond, Indiana. For eighteen years Mr. Curtis has been the superintendent and secretary of St. Luke's Hospital. Mr. Curtis has had a wide experience in hospital work and also has a large acquaintanceship among the medical men of the country. Mr. Curtis graduated from college as a mechanical engineer and, while acting as assistant superintendent of the New York Hospital, attended medical college, after finishing his studies he went to the General Hospital of Elizabeth, New Jersey, and it was from this hospital eighteen years ago, he went to St. Luke's Hospital, Chicago. During the last years Mr. Curtis has also been prominent as a consulting engineer, especially among hospitals, and has introduced many advanced and successful ideas in hospital construction and organization. His wide experienced among hospitals and medical men, coupled with his technical training, makes him peculiarly well fitted for his new position.

Mr. Frank S. Betz, under whose control the concern bearing his name assumed its present proportions, will continue with the company as chairman of the board of directors and give the organization the benefits of his long experience and training. His many and diversified interests are given as reasons for his retiring as active head of the company.

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